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Special Oversight Board  
Interim Report  
August 1999



**Presidential Special Oversight Board  
for Department of Defense Investigations  
of Gulf War Chemical and Biological Incidents**

August 20, 1999

**Chairman**

Hon. Warren B. Rudman

**Vice Chairman**

Hon. Jesse Brown

**Board Members**

Dr. Vinh Cam

LTG (Ret.) Marc A. Cisneros

CSM (Ret.) David W. Moore

RADM (Ret.) Alan M. Steinman

ADM (Ret.) Elmo R. Zumwalt, Jr.

The Honorable William S. Cohen  
Secretary of Defense  
1000 Defense Pentagon  
Washington, DC 20301

Dear Secretary Cohen:

I am hereby submitting to you the *Interim Report* of the Special Oversight Board.

This report is submitted in accordance with the provisions of the Federal Advisory Committee Act and Executive Order # 13075. Section 4. General Provisions (a) of the Executive Order states that "...the functions of the President under the Federal Advisory Committee Act, as amended, that are applicable to the Special Oversight Board...shall be performed by the Secretary of Defense...."

There are no dissenting comments from the Board members.

I will submit the Board's *Final Report* to you in May 2000.

**Executive Director**

COL (Ret.) Michael E. Naylon

Sincerely,

Warren B. Rudman  
Chairman



Special Oversight Board

for

Department of Defense

Investigations

of

Gulf War

Chemical and Biological Incidents

***INTERIM REPORT***



**Special Oversight Board**  
**for**  
**Department of Defense Investigations**  
**of**  
**Gulf War Chemical and Biological Incidents**

**BOARD MEMBERS**

**The Honorable Warren B. Rudman, Chairman**

**The Honorable Jesse Brown, Vice Chairman**

**Dr. Vinh Cam**

**Lieutenant General (Retired) Marc Anthony Cisneros**

**Command Sergeant Major (Retired) David W. Moore**

**Rear Admiral (Retired) Alan M. Steinman**

**Admiral (Retired) Elmo R. Zumwalt, Jr.**

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# **EXECUTIVE SUMMARY**

## **Interim Report**

### **Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents**

The Special Oversight Board (SOB or Board) was created by Executive Order 13075 on February 19, 1998, in direct response to a recommendation from the Presidential Advisory Committee (PAC) on Gulf War Veterans' Illnesses *Special Report*, "To ensure full public accountability and reinforce the commitment to an independent review, an entity other than DOD should perform any oversight." The President appointed the seven-member Board under the chairmanship of former U.S. Senator Warren B. Rudman in April 1998. Board activities are governed by the Federal Advisory Committee Act, commonly referred to as the "Government in the Sunshine Act."

The Board's mission is to provide the President, through the Secretary of Defense, advice and recommendations based on its performance of two principal roles: 1) independent oversight of the remaining DoD investigations into possible detections of, and exposures to, chemical or biological warfare agents and environmental and other factors that may have contributed to Gulf War illnesses; and 2) overall evaluation of DoD's plan for and progress toward the implementation of the PAC's *Special Report* recommendations. The bulk of the Board efforts have concentrated on the work of the DoD Office of the Special Assistant for Gulf War Illnesses (OSAGWI) and its case narratives and environmental exposure reports. The Board has actively solicited the views and opinions of veterans groups, individual veterans, scientists, and researchers regarding Gulf War illnesses.

The Board held four public meetings between November 1998 and July 1999 and monthly informational meetings on a wide variety of topics to allow subject matter

experts, government agencies, interested organizations and individuals to exchange views and concerns with Board members and staff. Board members have made field visits to U.S. military installations, allied military and defense establishments, and U.S. military "town hall" meetings organized by OSAGWI.

A summary of the Gulf War, the Executive and Legislative Branch's response to Gulf War illnesses, and the actions of various Gulf War coalition partners are presented in Chapter 2.

*This Interim Report addresses:*

- Office of the Special Assistant for Gulf War Illnesses (OSAGWI)
- OSAGWI Case Narratives and Environmental Exposure Reports
- Presidential Advisory Committee on Gulf War Veterans' Illnesses recommendations
- Recommendations and observations and projected future activities

#### Office of the Special Assistant for Gulf War Illnesses

OSAGWI was established by the Deputy Secretary of Defense on November 12, 1996 in the wake of DoD revelations that U.S. and coalition forces may have been exposed to low-level nerve agents following the destruction of enemy ammunition stores at Khamisiyah. Dr. Bernard Rostker was appointed the Special Assistant, "responsible for all of the Department's efforts regarding illnesses being experienced by those who served in the Gulf War." OSAGWI assumed the mission of determining the causes of Gulf War illnesses and ensuring that veterans received proper care. OSAGWI eventually expanded its mission to include the goal of ensuring that DOD agencies adopt doctrine, policy, and procedures designed to reduce the risk for troops in the future.

OSAGWI has considerable DoD resources to carry out its mission, 196 military, civilian and contract personnel and a budget of over \$30 million. Chapter 3 summarizes how all potential exposure incidents, environmental issues, and other factors are

investigated that may have contributed to Gulf War illnesses. The Investigation and Analysis Division (IAD) is responsible for researching and analyzing all information that could be associated with an investigation. The products of these efforts have been fourteen case narratives, two environmental exposure reports, and four information papers. In addition, the RAND Corporation has released four of eight reviews of the medical literature on a variety of subjects associated with Gulf War service and Gulf War illnesses. IAD also sponsors the telephone hot-line, Internet sites (GulfLINK), and town hall meeting outreach efforts to assist its investigative activities. Outreach and information on availability of adequate medical care for Gulf War veterans is provided by IAD, the Public Affairs Office, Medical Outreach and Issues Team, and the Information Technology Team. The Public Affairs Office provides regular updates, briefings, and outreach support to veterans service and military service organizations. The Lessons Learned Implementation Team, the newest OSAGWI component was formed to foster implementation of lessons learned from case narratives and environmental exposure reports. This team works with and through the Joint Staff to insure implementation of lessons learned by the military services.

OSAGWI Information Papers suggest mission creep and do not directly address incidents of potential chemical exposures or possible causes of Gulf War illnesses.

#### OSAGWI Case Narratives and Environmental Exposure Reports

As of June 30, 1999, the board has reviewed eight case narratives and two Environmental Exposure Reports released by OSAGWI. The OSAGWI case narrative methodology, environmental exposure report methodology, review process, and report disposition "process" is reviewed and discussed in Chapter 4.

Several "process" recommendations are made:

- OSAGWI should present in its reports the evidence, its expert opinion, and the assumptions it used to weigh the pieces of evidence in reaching its conclusions.

- OSAGWI should clearly demonstrate how it digests and evaluates the information it amasses to reach the conclusions presented in its reports.
- OSAGWI should extend the external review of its environmental reports to other appropriate agencies and subject matter experts.
- OSAGWI should develop a policy for determining when and by what criteria interim reports become final.

The Board has reviewed the following environmental exposure reports.

- *Depleted Uranium in the Gulf.* The Board agrees with the conclusion that the available evidence does not support claims that DU caused or is causing the undiagnosed illnesses some Gulf War veterans are experiencing.
- *Oil Well Fires.* The Board will present its findings in the *Final Report*.

The Board has reviewed the following case narratives. These assessments are consistent with the evidence OSAGWI presented.

- *Reported Detection of Chemical Agent Camp Monterey, Kuwait.* Review and insure accuracy of references and quotations. Change status to "Final Report."
- *Kuwaiti Girls School.* Chemical warfare agent definitely not found and inhibited red fuming nitric acid definitely found. Change status to "Final Report."
- *Tallil air Base, Iraq.* Review and insure accuracy of references and quotations. Change status to "Final Report."
- *An Nasiriyah Southwest Ammunition Storage Point.* Review and insure accuracy of references and quotations. Change status to "Final Report."

The following case narratives did not address important information and OSAGWI did not investigate leads that could provide evidence for an alternative assessment.

- *Reported Mustard Agent Exposure.* The Board recommended that OSAGWI update and amend the case narrative.

- *Czech/French Chemical Agent Detection.* The Board withholds its recommendation concerning the final disposition of this case narrative until OSAGWI updates this report.

#### Presidential Advisory Committee Recommendations

The twelve PAC recommendations have been addressed at the bimonthly meetings to receive DoD and other agency implementation updates.

Reviews on implementing the following recommendations have been held:

- *High priority on addressing pre- and post-deployment surveillance.*
- *All research on Gulf War veterans' illnesses that is government funded should be subjected to external competition and independent peer-review.*
- *The Secretary of Defense and the Joint Chiefs of Staff should move swiftly and conscientiously to address the past and current technological limitations of U.S. CW agent detectors.*
- *DoD should immediately begin developing doctrine that specifically addresses possible low-level, sub-clinical exposure to CW agents.*

Review of the following recommendations are not required:

- *The White House should develop a plan to ensure Gulf War veterans and the public have access to and can be represented in the future deliberations about possible CBW agent exposures.* The formation of the Presidential Special Oversight Board accomplishes this recommendation.
- *DoD should identify all individuals within a 300-mile radius from the Khamisiyah pit and conduct an additional, complementary notification.* New information indicates that a few further exposure notifications may be needed and some members may have to be re-notified that they were in fact not exposed.

## Recommendations, Observations, and Projected Activities – Future Projects

### Recommendations

The Board recommends that:

- The Special Assistant report to the Board within 60 days (from the July 13, 1999, Board hearing) identifying all case narratives currently scheduled, programmed, or under analysis for potential investigation and recommend to the Board those investigations and activities that are candidates for discontinuation.
- The Assistant Secretary (C<sup>3</sup>I) respond to this recommendation and report to the Secretary of Defense and the Board, within 30 days of this report, as to the progress on this matter as reported by the CJCS.
- The *Mitre Report* regarding intelligence collection and analysis during the Gulf War be issued in an unclassified form.
- The Secretary of Defense obtain a formal commitment from the Secretary of Veterans Affairs for routine participation and representation by DVA in support of OSAGWI's outreach and town hall meetings.
- OSAGWI cease work on all information papers except those due to be released within 60 days of the publication of this report.
- Any continuation of the "lessons learned" activity at OSAGWI be supported by a plan, approved and directed by the Secretary of Defense, that addresses and recognizes the formal integration of the OSAGWI lessons learned team into the existing Military Service and Joint Staff lessons learned infrastructure.
- In assessing the likelihood of the presence of chemical or biological agents OSAGWI should present in its reports the evidence, its expert opinion, and the assumptions it used to weigh the pieces of evidence in reaching its conclusions.



- OSAGWI should clearly demonstrate how it digests and evaluates the information it amasses to reach the conclusions presented in its reports.
- OSAGWI should develop a policy for determining when and by what criteria interim reports become final.
- OSAGWI include in the rewrite of its DU environmental exposure report the exposure parameters (such as quantity of DU, duration of exposure) for the 13 exposure scenarios to establish that Level I scenarios represent the highest exposure levels.
- OSAGWI extend the external review of its environmental exposure reports to other appropriate agencies and subject matter experts.
- The Department continues to review new information and modeling results, and take action as necessary and appropriate.

### Observations

The Board has made a series of observations that are discussed in detail in the body of the report. Briefly, these observations involve:

- The feasibility of integrating the Personal Information Carrier (PIC) and Global Positioning System (GPS) technology for battlefield location of the individual.
- Epidemiological study of the signs and symptoms of undiagnosed Gulf War illnesses with an age and gender matched general population sample.
- Some scientists suggest that genetic predisposition to certain illnesses may explain why some Gulf War veterans with similar exposures are ill while others are not. The DoD should explore the plausibility of conducting genetic susceptibility research as it applies to the U.S. military population.
- The Deployment Health Surveillance and Readiness Program (DHSRP) definition of deployment fails to include any personnel deploying for less than 30 days, and it generally does not include personnel deployed aboard vessels. The HIV serum sample process can be improved to obtain sera samples in a

more timely manner (e.g., draw sera just prior to and just after deployments). DoD comment is requested on these two observations.

- Since a future “scaled down” OSAGWI organization (and its “lessons learned” cell) appears to represent an effort similar to that prescribed for the new Military and Veterans Health Coordinating Board (MVHCB), the Board suggests that the Secretary of Defense (a member of the MVHCB) identify the missions or functions common to these two organizations, and either, a) assign those duplicative responsibilities to the MVHCB, or b) report to the President why certain functions should remain with the DoD instead of being assumed by the MVHCB.
- The Board will review the three separate CIA reports expected to be released before the end of 1999.

#### Projected Activities—Future Projects

Public Board Meetings: Seattle, WA – October 1999  
Washington, DC – April 2000.

Monthly/Bimonthly Meetings: Second Wednesday of every month.

OSAGWI Reviews. The Board intends to review the 17 Case Narratives and the 6 Environmental Exposure Reports expected between this Interim Report and April 2000.

Board members and staff will attend Gulf War illnesses workshops and symposia, Persian Gulf and Military and Veterans Health Coordinating Board Working Group meetings, and Institute of Medicine study group public meetings where applicable.

Final Report. The Board will issue a *Final Report* in May 2000.

# **The Special Oversight Board**

## **Chapter 1**

### **Mission, Charter, and Activities**

President William J. Clinton established the Special Oversight Board (SOB) by issuing Executive Order 13075 on February 19, 1998 (Appendix A), in direct response to a recommendation contained within the Presidential Advisory Committee (PAC) on Gulf War Veterans' Illnesses *Special Report*.<sup>1</sup> The PAC had recommended that the Department of Defense (DoD) receive an independent evaluation of its policies and practices and that "to ensure full public accountability and reinforce the commitment to an independent review, an entity other than DoD should perform any oversight."<sup>2</sup> President Clinton appointed a Board of seven members, designating former United States Senator Warren B. Rudman as Chairman.<sup>3</sup> The Board's charter (Appendix B) was filed in May of 1998.

The activities of the Board are governed by the Federal Advisory Committee Act (FACA), as amended (Pub. L. 92-463, 5 U.S.C., App.); Executive Order 12024, December 1, 1977; and Public Law 94-409, commonly referred to as the "Government in the Sunshine Act." All Board meetings (a quorum being four or more members present) must be announced in the Federal Register and be open to the public (discussion or review of classified material excepted).

Executive Order 13075 outlines the Board's mission:

*The Special Oversight Board shall provide advice and recommendations based on its review of Department of Defense investigations into possible detections of, and exposures to, chemical or biological weapons agents and environmental and other factors that may have contributed*

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<sup>1</sup> Presidential Advisory Committee on Gulf War Veterans' Illnesses (PAC) *Special Report*, October 31, 1997.

<sup>2</sup> Ibid., p. 20.

<sup>3</sup> The White House, Office of the Press Secretary, "President Clinton Names Vice-chair and Members of the Special Oversight Board...", April 27, 1998.

*to gulf war illnesses.... It shall not be a function of the Board to conduct scientific research.<sup>4</sup>*

The Board's charter (Appendix B) outlines more specifically how the Board intends to conduct its mission:

*The Special Oversight Board shall provide to the President, through the Secretary of Defense, advice and recommendations based on its performance of two principal roles.*

*1. OVERSIGHT: Independent oversight of the remaining investigations being conducted by the Department of Defense (DoD) with the assistance, as appropriate, of other executive departments and agencies into possible detections of, and exposures to, chemical or biological warfare agents and environmental and other factors that may have contributed to Gulf War Illnesses.*

*2. EVALUATION: Overall evaluation of the DoD's plan for and progress toward the implementation of the Presidential Advisory Committee's recommendations contained in its Special Report submitted to the President on October 31, 1997.*

Individual veterans have expressed the hope that the Board would identify causes of undiagnosed illnesses of Gulf War veterans. This expectation is not within the charter or the capabilities of this Board. More than \$133 million in federal research funding has been targeted at this issue through FY 1999, and the extent of this research is well documented in a report prepared by the Persian Gulf Veterans Coordinating Board.<sup>5</sup>

In compliance with the executive order and the charter, the focus of the Board has been on the DoD investigations into Gulf War illnesses and implementation of the PAC recommendations. The bulk of our efforts have concentrated on the work of the Office of the Special Assistant for Gulf War Illnesses (OSAGWI), the organization charged by the Deputy Secretary of Defense to lead and provide overall coordination for the Department's effort on this issue. The Board has actively solicited the views and opinion of veterans groups, individual veterans, scientists, and researchers on the issue of

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<sup>4</sup> Executive Order 13075 of February 19, 1998.

<sup>5</sup> Persian Gulf Veterans Coordinating Board—Research Working Group, "Annual Report to Congress—1998 Research on Gulf War Veterans' Illnesses," June 1999.

the Gulf War illnesses. We will continue to maintain close contact with veterans and their representatives as we perform our oversight responsibilities.

## **BOARD ACTIVITIES**

### **Public Meetings**

The Board members met for the first time in July 1998 and received a detailed briefing from the DoD on the history and background of the Gulf War issue. No deliberations were conducted at this session.

The Board has held four public sessions.

- |                       |               |
|-----------------------|---------------|
| • Washington, DC      | November 1998 |
| • San Antonio, Texas  | April 1999    |
| • Arlington, Virginia | June 1999     |
| • Washington, DC      | July 1999     |

Complete transcripts from all hearings can be found at the Board's World Wide Web home page at:

**[www.oversight.ncr.gov](http://www.oversight.ncr.gov)**

The Board established this web site to demonstrate the public nature of the Board's efforts.

At the first hearing in November 1998 the Chairman outlined in detail how the Board would conduct oversight.<sup>6</sup> The Board heard testimony from senior DoD officials, the Special Assistant for Gulf War Illnesses (OSAGWI), The Joint Staff, and the Office of the Secretary of Defense (Health Affairs), as well as from the general public. The Board, equally anxious to receive testimony from the veterans community, invited major veteran service organizations (VSO) and individual veterans to testify. A major theme emerged during the two-day hearing: veterans want medical care, medical treatment, and award of benefits for service connected disabilities. The Board is sensitive and concerned for those ill Gulf War veterans whose symptoms remain undiagnosed. The Board will address these issues as they fall within the scope of the executive order and charter and will make recommendations as appropriate.

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<sup>6</sup> The full text of the Chairman's remarks can be found in Appendix C.  
Chapter 1

The Board met in April 1999 in San Antonio to demonstrate its commitment to be available to receive input from those individuals unable to address the Board in Washington, DC. Two major VSOs and several individual veterans testified before the Board at this hearing. A featured presentation was given by Dr. Robert Haley, of the University of Texas, Southwestern Medical Center, Division of Epidemiology and Scientific Graphics Laboratory, on technical aspects of his neurological research. The Board also provided to the public a general overview of its activities since the preceding public meeting.

As a follow-up to the San Antonio meeting, the Board invited Dr. Haley to reappear and provide additional testimony in Arlington, Virginia, in June 1999. The Board meeting was open to the public, and invited scientists from Johns Hopkins University and Boston, Massachusetts, were also in attendance.

The Board's most recent public meeting was in Washington, DC, in July 1999. The Board heard detailed testimony from the Special Assistant for Gulf War Illnesses that outlined a conceptual model for the OSAGWI organization into the future. Additional testimony about depleted uranium (DU) was given by two scientific researchers and an OSAGWI staff representative. The Chairman noted that there continues to be controversy on DU, despite testimony and scientific opinion that low-level or short-term exposure(s) to this element offers relatively little risk to humans. The Board will continue to monitor the debate on this matter. The *Final Report* will contain the Board's recommendations on this subject.

A Board member, citing previous experience with the U.S. government concerning "Agent Orange," indicated that he did not think that there was nor had there been a "government cover-up" to suppress available information concerning facts surrounding the Gulf War or chemical or biological exposures of U.S. or coalition troops.<sup>7</sup>

Three Board members publicly expressed their confidence in the Special Assistant and his leadership, thereby dismissing, without comment, calls for his removal.<sup>8</sup> The Chairman noted that the Board's charter required a critical examination of the Department's activities, and the fact that the Board carried out those responsibilities

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<sup>7</sup> See hearing transcript for exact remarks.

<sup>8</sup> Several weeks before the July hearing, two veteran organizations called for the removal or resignation of the Special Assistant for Gulf War Illnesses.

neither reflected negatively on the accomplishments of the Department nor lent support to calls for the removal of the leader of those efforts. The Board will not address this matter further.

A representative of the Central Intelligence Agency (CIA) reported that the CIA plans to release three additional studies on the issue of potential chemical, biological, and radiological exposures to Gulf War veterans by the end of 1999. The CIA assessment is that U.S. troop exposure to chemical, biological, and radiological agents is probably limited to exposure from the Khamisiyah demolitions. The CIA will continue to seek and evaluate new information as it becomes available.

### **Monthly Meetings**

At the first public meeting in November 1998 the Chairman proposed that the Board hold monthly informational meetings on a wide range of topics. These meetings are designed to invite subject matter experts, knowledgeable organizations, and interested individuals to meet with Board members to explore issues of concern. Invited participants have included government officials, researchers, and veterans' representatives. The Board extended an open invitation to VSOs to attend these sessions. Topics covered have included the Personal Information Carrier (PIC), DoD and Department of Veterans Affairs (DVA) Persian Gulf Health Registries, RAND Corporation methodologies and research, DU, stress, the DoD Deployment Health Surveillance and Readiness Program, internal organization and operations of OSAGWI, the DoD program for chemical and biological defense, and selected aspects of Canadian and British Armed Forces veterans' health.

Board member Zumwalt contacted the Chairman of the Joint Chiefs of Staff (CJCS) following a meeting on the PIC, urging that the military establish a task force to explore the integration of Global Positioning System (GPS) and the PIC to record the battlefield location of soldiers, sailors, airmen, and marines. This recommendation, based on the continuing difficulty in identifying individual (vs. by unit, UIC) personnel movements in a theater of operations, was forwarded to the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence.<sup>9</sup> **The Board**

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<sup>9</sup> CJCS letter to ADM Zumwalt, Jr., 12 November 1998.

**recommends that the Assistant Secretary (C<sup>3</sup>I) respond to this recommendation and report to the Secretary of Defense and the Board, within 30 days of this report, as to the progress on this matter as reported by the CJCS.**

These meetings focus on specific areas that are of interest to both the Board and the "Gulf War illness" community. They promote free exchange of ideas and discussion on controversial topics and provide a forum for both debate and in-depth understanding of technically complex and detailed issues. A detailed description of these sessions is contained in Appendix D.

#### **Other Noteworthy Board Activity**

Board members have made field visits to the Walter Reed Army Medical Center Gulf War Health Care Center program, the United Kingdom and French Ministries of Defence and the French Technical School for NBC Warfare, the U.S. Army's Center for Health Promotion and Preventive Medicine (CHPPM), and several OSAGWI "town hall" meetings held at various U.S. military installations. The Board also participated in several National Security Council interagency meetings where the agenda was focused exclusively on matters pertaining to the subject of Gulf War illnesses and the application of the Gulf War experiences and lessons to ongoing U.S. military force health and protection issues. The Board intends to address these military force health and protection issues in the *Final Report*.

#### **Board Review of OSAGWI Publications**

A primary focus of the Board thus far has been review of OSAGWI case narratives and environmental exposure reports. OSAGWI's reports are written to provide veterans with answers regarding what is now known about specific events and exposures that took place during the Gulf War. As of June 30, 1999, the Board had reviewed eight case narratives and two environmental exposure reports. A detailed report of the Board's findings and recommendations concerning OSAGWI's reports is contained in Chapter 4 of this report.



## **Chapter 2**

### **Historical Section**

The Gulf War consisted of a six-month buildup, a five-week air war, and four days of ground combat. Nearly 700,000 U.S. military personnel served in Operations DESERT SHIELD and DESERT STORM from August 1990 to June 1991, with significantly fewer battlefield casualties than predicted. However, within months of the end of the war many servicemembers began to experience a variety of health problems. While a majority of these maladies were conventional illnesses, a significant number of veterans had signs and symptoms that could not be associated with known medical conditions, including muscle and joint pain, severe headaches, memory loss, fatigue, and sleep disorders. These undiagnosed signs and symptoms have been collectively called Gulf War illnesses.

Shortly after the Gulf War, Congress passed PL 102-190, which directed the DoD to establish a Persian Gulf registry to determine the short- or long-term health consequences of exposure of members of the Armed Forces to the "fumes of burning oil" during Operation DESERT STORM. On November 2, 1992, PL 102-585 was passed. This legislation expanded the Persian Gulf Oil Well Fires Registry and established the Persian Gulf Veterans Health Registry. In 1994 DoD established the Comprehensive Clinical Care Examination Program (CCEP) to provide health examinations for active duty Gulf War veterans. More than 100,000 Gulf War veterans have participated in either the CCEP or the DVA Persian Gulf Registry Program.

The DoD, DVA, and Department of Health and Human Services (DHHS) have conducted numerous research studies, clinical evaluation programs, and workshops to address the health concerns of Gulf War veterans. These Departments have also collaborated and set up various panels, including the Persian Gulf Veterans Coordinating Board (PGVCB), a Persian Gulf Expert Scientific Panel at the DVA, and the Persian Gulf Illness Investigation Team (PGIIT) to address veterans' concerns. Congress has worked with the Executive Branch in establishing veterans' registries and in passing legislation providing compensation and benefits to veterans of the Gulf War. However, Congress has also been critical of the Executive Branch's handling of the issue, particularly in

regard to DoD's investigation of chemical and biological incidents. The auditing arm of Congress, the General Accounting Office (GAO), has published many reports critical of the government's management of post-Gulf War health issues. Independent organizations such as the National Academy of Sciences (NAS) and the RAND Corporation have been contracted to review health consequences of the Gulf War. (For a list of key organizations that have published studies about Gulf War illnesses issues see Appendix G.)

By 1995 many veterans were still concerned that their illnesses were a consequence of exposures to a variety of substances during their Persian Gulf deployments and that the government was not doing all that it could to diagnose and treat their illnesses. In response to these concerns, the President established the Presidential Advisory Committee on Gulf War Veterans' Illnesses (PAC) on May 26, 1995, "... to conduct an independent, open and comprehensive review of all facets – risks, diagnosis, treatment and research – related to health issues and Gulf War service."<sup>10</sup> The PAC was to meet for 18 months.

The PAC met for two and one half years and provided analyses and recommendations to the President in four reports. The President extended the PAC's tenure on January 7, 1997, and directed the PAC to evaluate the government's implementation of its previous recommendations and to oversee the government's investigations into possible chemical and biological warfare agent exposures during the Gulf War.

The announcement by DoD in June 1996 that U.S. troops destroyed chemical munitions at the Khamisiyah Ammunition Depot in Iraq shortly after the Gulf War, possibly exposing thousands of U.S. military personnel to low levels of nerve gas, was a watershed event in the government's investigations of chemical and biological agent exposures in the Persian Gulf. Until the Khamisiyah announcement, the DoD had steadfastly maintained that, with the exception of one Army private first class, no U.S. military personnel were exposed to chemical or biological warfare agents during the Gulf War.

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<sup>10</sup> Presidential Advisory Committee on Gulf War Illnesses (PAC), Final Report, December 31, 1996, pp. 2-4.

The DoD's announcement of its investigation of the demolition at Khamisiyah was a primary factor in the President's decision to extend the PAC. It also prompted the Deputy Secretary of Defense to create the Office of the Special Assistant for Gulf War Illnesses (OSAGWI) in November 1996. OSAGWI was directed to "leave no stone unturned" in its investigation of possible chemical and biological incidents and environmental exposures. OSAGWI continues to investigate Gulf War illnesses and is the principal focus of the Board's oversight activities.

In September of 1996, the Deputy Secretary of Defense directed the Assistant to the Secretary of Defense for Intelligence Oversight (ATSD [IO]) to provide an independent analysis of intelligence information available to DoD during the Gulf War about potential chemical weapon (CW) sites, including Khamisiyah. The ATSD (IO) was directed to determine how and to what extent DoD used available intelligence information. The ATSD (IO) contracted with the MITRE Corporation in December 1996 to produce a study with an expectation that a final product would be completed by May 31, 1997. The report, which is classified, is nearing completion. **The Board recommends that the MITRE report<sup>11</sup> regarding intelligence collection and analysis during the Gulf War be issued in an unclassified form.**

Also in response to President Clinton's tasking to the PAC, the Director of Central Intelligence created the Persian Gulf War Illnesses Task Force, comprised of personnel drawn from the intelligence community, including the CIA, the Defense Intelligence Agency (DIA), the National Security Agency (NSA), and the National Imagery and Mapping Agency (NIMA). One of the task force's first assignments was to determine what the intelligence community knew about the Khamisiyah storage facility, when it knew it, and what it did with that information. An earlier CIA task force had focused on identifying areas of potential exposure to chemical agents and on assessing what had happened in March 1991 at Khamisiyah.<sup>12</sup> The CIA task force has published eight reports concerning CW issues and Gulf War intelligence, including a recently published comprehensive analysis of the location of Iraqi chemical weapons sites, type of agent(s) present at the sites, and extent of damage to the sites from coalition bombing.

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<sup>11</sup> The report, entitled *Iraqi Chemical Warfare: Analysis of Information Available to DoD*, is also known as the *Mitre Report*. The report was commissioned by the Office of the Assistant to the Secretary of Defense for Intelligence Oversight.

The PAC, in its *Special Report* dated October 31, 1997, made a number of recommendations concerning the government's treatment of Gulf War illnesses. The PAC finding that "...DoD cannot itself lead an investigation on possible CW or BW agent exposures that will be viewed as credible"<sup>13</sup> was a reflection and reinforcement of a similar sentiment held by both the American veterans' community and the general public. Veterans had been told there were no exposures that occurred during the Gulf War. Then, following Khamisiyah, they were told that they might have been exposed to chemical weapons that were destroyed by American forces. The 'process' by which the government had addressed this issue was seen as one in which the public and the veterans' community were not participants. Veterans were generally skeptical of any government pronouncements on this issue and were not "invested" in the process of discovering the causes of Gulf War illnesses.

The stunning announcements by the DoD and the PAC findings and recommendations demanded that a vehicle be found to further examine the process by which the government was conducting its investigations and that, to the extent possible, the veterans' community be included in that process. The PAC finding that "... DoD cannot itself lead an investigation on possible CW or BW exposures that will be viewed as credible" formed the basis of its recommendation that:

*The White House develop a plan to ensure Gulf War veterans and the public have access to and can be represented in future deliberations about possible CBW agent exposures. To ensure full public accountability and reinforce the commitment to an independent review, an entity other than DoD should perform any oversight.<sup>14</sup>*

The PAC recommendation resulted in the establishment of the Special Oversight Board by the President in February 1998. (Oversight of the implementation of these recommendations by the government is a primary mission of the Special Oversight Board and is addressed in a separate section of this report.) The President's executive order and appointment of the Special

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<sup>12</sup> Central Intelligence Agency (CIA), Persian Gulf War Illnesses Task Force, *Khamisiyah: A Historical Perspective on Related Intelligence*, 9 April 1997.

<sup>13</sup> Presidential Advisory Committee on Gulf War Veteran's Illness, *Special Report*, October 31, 1997, p. 20.

<sup>14</sup> Ibid.

Oversight Board was the beginning of this new effort. The Board, in turn, has insured that VSOs and individual veterans are fully incorporated into its work.

The United States is not the only country whose veterans have been reporting unexplained illnesses as a result of their service in the Persian Gulf. The British, Canadians, and Czechs have conducted programs and studies to determine the range and extent of GWI in their veterans. Other nations, such as France and Arab coalition partners, contend that their Gulf War veterans do not have similar problems.

In 1997 the British government created the Gulf Veterans Investigation Unit, similar to OSAGWI, to investigate Gulf War illness in the United Kingdom (UK). The British are currently conducting two major epidemiological studies and research on possible health effects of the combination of vaccines and tablets that were given to UK troops in the Persian Gulf to protect them against biological and chemical warfare agents. They are also conducting a study to investigate the hypothesis that symptoms of fatigue, weakness, muscle pain, and sensory disturbance that have been reported by some Gulf War veterans might be due to a disturbance of nerve or muscle function. Research to try to determine the effects of low-level exposure to organophosphate pesticides in the context of ill-health reported by UK farm workers is nearing completion.

The Canadian government has recently released a report, *Health Study of Canadian Forces Personnel Involved in the 1991 Conflict in the Persian Gulf*. This study concluded that Canadian military personnel who participated in the Gulf War have higher self-reported prevalence of medical and psychiatric conditions before, during, and after the Gulf War, as well as adverse birth outcomes, compared with contemporary military personnel who were not deployed to the Persian Gulf. According to the study, "The most prevalently associated risk factors for these health outcomes were psychological stressors and physical trauma."<sup>15</sup>

The Czech Ministry of Defense released two studies in 1997 related to Czechoslovak service during the Gulf War. One report examined Czech Chemical Unit detections of chemical warfare agents during the Gulf War. The second is a report of the

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<sup>15</sup> *Health Study of Canadian Forces Personnel Involved in the 1991 Persian Gulf Conflict* ([http://www.DND.ca/menu/press/reports/health/health\\_study\\_e\\_vol1\\_joc.htm](http://www.DND.ca/menu/press/reports/health/health_study_e_vol1_joc.htm)).

Czech Medical Committee of the Ministry of Defense regarding the medical support to and medical conditions of the Czech unit before, during, and after the Gulf War. The Czech government concluded that Czech Gulf War veterans do not suffer from the unexplained illnesses affecting U.S. veterans.

## Chapter 3

### Office of the Special Assistant for Gulf War Illnesses

The Office of the Special Assistant for Gulf War Illnesses (OSAGWI) has been the focus of the Board's oversight of DoD investigations of chemical and biological incidents. This emphasis reflects the role of OSAGWI as the lead DoD agency for investigating potential chemical and biological exposures during Operation DESERT STORM in addition to researching other possible causes of Gulf War illnesses (GWI).

The Deputy Secretary of Defense established OSAGWI on November 12, 1996, in the wake of DoD revelations that U.S. and coalition personnel may have been exposed to low-level nerve agents following the destruction of enemy ammunition stores at Khamisiyah. In his November 1996 memorandum, the Deputy Secretary of Defense designated Dr. Bernard Rostker, then Assistant Secretary of the Navy for Manpower and Reserve Affairs<sup>16</sup>, to become his special assistant and direct OSAGWI in addition to his existing responsibilities. The memorandum made Dr. Rostker "responsible for all of the Department's efforts regarding illnesses being experienced by those who served in the Gulf War," and OSAGWI assumed the mission of determining the causes of Gulf War illnesses and ensuring that veterans received proper care.<sup>17</sup>

The Special Assistant has since expanded his mission to include another goal. Concerned that many nontactical lessons learned from the Gulf War, particularly those relating to long-term health consequences, could not compete with other institutional priorities, the Special Assistant charged his staff with ensuring that DoD agencies adopt doctrine, policy, and procedures designed to reduce risk for troops in the future.<sup>18</sup>

DoD has provided OSAGWI with considerable resources to accomplish its mission. Initial plans provided for a 110-person organization, a nine-fold increase over the Persian Gulf Illnesses Investigation Team (PGIIT), OSAGWI's immediate

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<sup>16</sup> Dr. B. Rostker, The Special Assistant, was appointed Under Secretary of the Army, October 26, 1998.

<sup>17</sup> Memorandum, Honorable John White to Secretaries of the Military Departments, et al, November 12, 1996, Subject: Special Assistant for Gulf War Illnesses; DoD News Release 634-96, November 12, 1996.

<sup>18</sup> OSAGWI, Second Annual Report, November 1997-November 1998, pp. 35-6; OSAGWI briefing to Special Oversight Board, May 5, 1999, Subject: Lessons Learned Implementation Directorate.

predecessor within the Office of the Secretary of Defense. Instead, OSAGWI has grown to 196 personnel, 26 of whom are military and civilian government employees. The remainder are contract personnel. The OSAGWI annual budget has expanded to more than \$30 million, seven times more than that of the PGIT.<sup>19</sup>

The Special Assistant's allocation of assets within his organization clearly reflects OSAGWI's tripartite mission and its many responsibilities. Appropriately, the Investigations and Analysis Division (IAD) is the largest subunit since it is responsible for researching and analyzing all potential exposure incidents, environmental issues, and other factors that may have contributed to Gulf War illnesses. Resources for the other divisions appear to be appropriate to their mission and OSAGWI priorities. However, the Board has concern over the extremely high ratio of contract to government employees. The need to quickly start up a robust organization fully justified the initial reliance on contractors in 1996. While contractors provide the advantages of rapidly acquiring and releasing personnel, they possess a distinct cost disadvantage when compared with the salaries and benefits of term and temporary civil servants. Since OSAGWI knew that its operations would extend for at least three years, based on its hiring actions, greater emphasis should have been placed on increasing the organization's base strength by hiring less costly nonpermanent government employees. The resulting savings might then have been devoted to other GWI-related initiatives.

OSAGWI has labored intensively to describe and to explain specific incidents of suspected chemical exposures as well as potential environmental hazards both during and after the Gulf War. The organization has released fourteen chemical case narratives, two environmental exposure reports, and four information papers. In addition, the RAND Corporation has released four of the eight reviews of medical scientific literature that OSAGWI commissioned it to conduct. These investigations and their contribution toward achieving the one OSAGWI mission enumerated in Deputy Secretary White's November 1996 memorandum will be discussed in the following chapter. OSAGWI's investigatory process will be briefly summarized here.

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<sup>19</sup> Letter, Dr. Bernard Rostker to Sen. Warren Rudman, April 20, 1999, Subject: Manning, Funding Levels, and Contract Vehicles.



IAD begins its evaluation of potential hazardous exposures by assigning the alleged incident to the Preliminary Analysis Team. Researchers gather and analyze information from witnesses, reports, and other documentation, then recommend to OSAGWI leadership whether the incident merits further investigation. If the leadership believes that the topic should be developed into a case narrative, IAD then assigns the case to the investigation branch whose expertise is most appropriate to the task. After the draft case narrative is completed and reviewed within IAD, OSAGWI distributes the draft to outside agencies for external review. IAD then considers and incorporates, as it deems appropriate, recommended changes. However, the revised draft usually is not resubmitted for external review. Upon completion of the review process, OSAGWI leadership conducts a final review before the case narrative is published.

OSAGWI has devoted considerable resources to ensure that Gulf War veterans receive adequate care. This effort incorporates activities of elements of IAD as well as the Public Affairs Branch, the Medical Outreach and Issues Team, and the Information Technology Team. The Board believes that OSAGWI has fully achieved its goal of assisting the veteran and that the organization has developed the template for success that other government agencies should use in the future.

Perhaps most noteworthy is OSAGWI's sustained effort to provide veterans and the public with as much information as possible through the Internet, a telephone hotline, and town hall meetings. In addition, OSAGWI has increasingly used veterans service and military service organizations (VSO and MSO, respectively) to provide information to Gulf War veterans.

OSAGWI's web site, GulfLINK, has provided the public, and especially the veterans community, with a valuable resource tool for furthering its understanding of GWI. The user-friendly site has received several awards and has been rated one of the best federal government web sites. GulfLINK averages more than 60,000 "hits" per month and offers a wide array of information as well as hyperlinks to other web sites. Visitors can access speeches, all OSAGWI publications, and a host of other data. Of particular note is the hyperlinking of most source documents to the footnotes found in the case narratives and other official releases.

The toll-free hotline system also deserves mention. Operated by the Veterans Data Management Team (VDM), a branch of IAD, the hotline provides OSAGWI with the means to receive and react to leads and calls for assistance. Moreover, the hotline also provides OSAGWI with the ability to alert thousands of veterans to services in addition to locating witnesses for case narratives and other research initiatives.

VDM has contacted or responded to over 10,000 veterans' calls, with most calls lasting several hours. Each of VDM's 18 veteran contact managers understands the key issues regarding GWI, and they know which agencies can best meet the individual veteran's needs. All of the veteran contact managers are veterans themselves, thereby providing them the ability to understand and to speak "the same language" as the caller. Since the managers represent all five military services, VDM attempts to link callers to a veteran contact manager who served in the same service. In addition, VDM will recontact callers as necessary, and they will respond to non-Gulf War related veteran issues.

Efforts to assist Gulf War veterans also include OSAGWI's discovery of more than 24,000 inpatient medical records at the National Personnel Records Center in St. Louis. OSAGWI managed to create a consolidated database to retrieve hospital records for many patients treated during Operations DESERT SHIELD and DESERT STORM.<sup>20</sup> VDM's ability to locate and access data from military medical records has provided many veterans with information that has significantly enhanced the quality of their ongoing medical treatment.

The Public Affairs Office (PAO) has also contributed to the organization's increasing ability to inform the veterans community and others. Consisting of one active duty officer, a term government employee, and eight contractors, PAO has conducted a vigorous outreach effort. Its personnel have enabled OSAGWI to develop a closer rapport with VSOs and MSOs, a noteworthy achievement considering OSAGWI's initial missteps with these organizations. VSOs and MSOs regularly receive updates and briefings on OSAGWI activities and other GWI initiatives, such as the comprehensive therapy program offered at Walter Reed Army Medical Center. OSAGWI leadership

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<sup>20</sup> OSAGWI, Second Annual Report, November 1997-November 1998, p. 9.

also meets with VSO/MSO leadership counterparts, and OSAGWI now regularly sends information displays and veteran contact managers to major VSO and MSO national and regional conventions. Improved relations have also provided OSAGWI with opportunities to provide information to Gulf War veterans through VSO/MSO publications such as AMVETS Magazine. In addition, improved relations with the veterans community have enabled OSAGWI to receive much-needed grassroots assistance in support of its town hall meetings and its ongoing installation visit initiative.

OSAGWI has conducted town hall meetings in 13 metropolitan areas throughout the country to discuss the results of its investigations as well as to learn and respond to veterans' concerns. To his credit, the Special Assistant selected the sites based on his determination to reach as many veterans as possible, even where hostile activists were expected. OSAGWI went to great efforts to publicize the meetings and to stimulate media interest. The meetings, in general, provided OSAGWI with additional sources of information and enhanced its credibility. In addition, PAO utilized editorial boards and other media coverage to increase public awareness of GWI issues.

Beginning in 1998, OSAGWI began an ongoing program to visit major military installations to increase its contact with active duty and reserve component forces. Depending on the installation's military population, OSAGWI conducts the visits over a two- to three-day period. Briefings are provided to Gulf War veterans, others who deployed to the Persian Gulf after 1991, and other interested personnel. OSAGWI targets leaders as well as junior personnel, and the briefings typically last one hour, followed by questions and answers. Board and staff members have observed several of these installation visits, and OSAGWI has incorporated Board comments in an ongoing effort to optimize the effectiveness of its presentations.

Medical personnel receive customized briefings to enhance their sensitivity to the special nature of Gulf War illnesses. In addition, OSAGWI conducts a nighttime town hall meeting so spouses and other veterans can attend. These meetings feature a question-and-answer format in which the audience may present questions directly or submit written questions for the moderator to present. DVA representatives often attend the town hall meetings to respond to questions regarding benefits and clinical care issues. Cumulative attendance at these installation visits has averaged more than 3,000 attendees,

many of whom request various OSAGWI publications.<sup>21</sup> **The Board recommends that the Secretary of Defense obtain a formal commitment from the Secretary of Veterans Affairs for routine participation and representation by DVA in support of OSAGWI's outreach and town hall meetings.**

The newest component of OSAGWI's mission is ensuring that DoD incorporates lessons learned from the Gulf War. The Special Assistant established the Lessons Learned Implementation Directorate (LLID) in late 1998 to accomplish this goal.<sup>22</sup>

OSAGWI began reporting lessons learned in its information paper, Mission Oriented Protective Posture (MOPP) and Chemical Protection, in October 1997. Since then, almost forty lessons learned have been identified in seven reports. However, OSAGWI possessed no formal mechanism to interface with each service's doctrinal agency responsible for implementing lessons learned. In addition, analysis of operational lessons learned did not identify any references to GWI, and informal attempts to influence the lessons learned process of the military services proved fruitless.

The Special Assistant has charged LLID with the responsibility of "institutionaliz[ing] validated observations/findings" and ensuring that they are implemented. LLID has taken the lead in facilitating service-wide implementation of depleted uranium (DU) training.<sup>23</sup> The division has chaired several joint service meetings, and LLID is making progress in updating DU training. However, the long-term success of LLID remains unproven, and most of its success with DU training must be attributed to a December 1998 memorandum in which the Deputy Secretary of Defense established a DU working group under OSAGWI's direction.<sup>24</sup>

The Board believes that identifying lessons learned ranks among OSAGWI's most important work. However, the Board remains unconvinced that the LLID is the optimal means of achieving DoD-wide implementation. Whereas the Special Assistant can assure Army-wide compliance due to his collateral duty as Under Secretary of that

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<sup>21</sup> OSAGWI Fact Sheet, undated 1999, Subject: Outreach Overview.

<sup>22</sup> OSAGWI briefing to Special Oversight Board, May 5, 1999, Subject: Lessons Learned Implementation Directorate.

<sup>23</sup> Ibid.

<sup>24</sup> Memorandum, Dr. John Hamre to Secretaries of the Military Departments, December 22, 1998, Subject: Depleted Uranium Training.

service, his ability to influence the other services is far more circumscribed. Moreover, the LLID must contend with each service's own lessons learned agency, all of which antedate OSAGWI by a decade or more.

The Joint Staff may offer a far more effective agency to promote implementation of force protection-oriented lessons learned, namely the Operational Plans and Interoperability Directorate (J-7). The Joint Staff possesses immense influence over the Unified Combatant Commands and can recommend that lessons learned be implemented by their subordinate service components. The Unified Combatant Commands, in turn, can direct that the various components assigned to them, usually consisting of all four services, comply. In addition, the Joint Chiefs themselves can enforce implementation within their respective services.

Although the Board feels strongly that lessons learned must be integrated into the total force, both active and reserve, the creation of the LLID also provokes some concern regarding mission creep. In the absence of major productivity increases or dropping of other missions, the addition of new branches and divisions poses the danger of overextending OSAGWI and diverting attention from the most important goals. OSAGWI must ensure that taking care of veterans and fully investigating and identifying the causes of GWI comes first. Lessons learned implementation also warrants consideration, but care must be taken to ensure that OSAGWI initiatives in that area are consistent with the organization's ability to deliver.

The Board notes that the OSAGWI Organization and Funding Model (FY 00-05) indicates that the Lessons Learned Directorate will mature and reach full strength in FY 2001. The Board intends to explore this issue further and make its recommendation in the *Final Report*. The OSAGWI proposed organization for FY 2005 includes a 14-person lessons learned cell. The Board recognizes the importance of "lessons learned" and supports the Department's efforts to incorporate these lessons into the appropriate military doctrine, training, management, and operational disciplines. Since the Joint Staff and the military services have similar organizational capabilities (e.g., Joint [Staff] Universal Lessons Learned System [JULLS]), **the Board recommends that any continuation of the "lessons learned" activity at OSAGWI be supported by a plan, approved and directed by the Secretary of Defense, that addresses and recognizes**

**the formal integration of the OSAGWI lessons learned team into the existing Military Service and Joint Staff lessons learned infrastructure.** The Board feels that the existing Military Service and Joint Staff mechanisms that identify, address, manage, and implement lessons learned must formally recognize and accept OSAGWI as a co-equal organization for purposes of "lessons learned." Otherwise, an OSAGWI "lessons learned team" is in effect "without credentials."

Similarly, OSAGWI's increasing emphasis on information papers has reinforced the Board's concern over mission creep. While these information papers provide the reader with additional understanding of the items under discussion—a commendable objective—the papers do not directly address incidents of potential chemical exposures or possible causes of Gulf War illnesses. Rather than produce brief reports or request similar papers from the service responsible for the equipment under consideration, OSAGWI has generated information papers that possess the length and degree of research equal to many of the case narratives (one 39-page information paper contains a nine-page bibliography). As the production schedule for information papers has increased, the publication of case narratives has decreased. As of July 1999, four of OSAGWI's next five publications will be information papers. The Board believes that OSAGWI should reallocate its resources to case narratives and other efforts that will help identify those factors that may or may not have contributed to Gulf War illnesses. Additionally, OSAGWI should delegate responsibility for future information papers to the appropriate proponent agencies.

**The Board recommends that OSAGWI cease work on information papers that are not due to be released within 60 days of the publication of this report.**

## CHAPTER 4

### OSAGWI Case Narratives and Environmental Exposure Reports

As of June 30, 1999, the Board had reviewed eight case narratives and two environmental exposure reports released by the Special Assistant for Gulf War Illnesses (OSAGWI). (See Appendix F.)

#### Case Narratives: Methodology

OSAGWI was created in November 1996 and released its first case narrative, *Khamisiyah*, in February 1997. For the first several months of operations, the OSAGWI staff developed its methodology for investigating Gulf War incidents and writing its reports. Beginning with its third case narrative, *US Marine Corps Minefield Breaching* (July 29, 1997), OSAGWI included a methodology section at the beginning of each of its case narratives. The methodology section contains a list of the types of information OSAGWI staff reviews and the scale it uses to assess the presence of chemical warfare agents (i.e., Definitely Not, Unlikely, Indeterminate, Likely, Definitely).

OSAGWI states in its methodology section: "The standard for making the assessment is based on common sense: do the available facts lead a reasonable person to conclude that chemical warfare agents were or were not present?" Board staff discussed OSAGWI's methodology with OSAGWI staff at several meetings. OSAGWI staff explained that they use a preponderance of evidence approach. However, this approach is not discussed in OSAGWI's methodology section. This approach does not require that all incidents be evaluated by the same objective criteria. Preponderance of evidence means that OSAGWI will weigh the evidence. The Board believes that, lacking overall objective criteria, OSAGWI should clearly specify in its reports what evidence carries the greatest

weight and why OSAGWI discounts or dismisses other contrary evidence. The Board believes that this is the only way OSAGWI can show the reader how it assessed the evidence. The Board believes that this is an important consideration and that without a discussion of the relative importance of the evidence OSAGWI does not always support its assessments.

**Recommendation: OSAGWI should present in its reports the evidence, its expert opinion, and the assumptions it used to weigh the pieces of evidence in reaching its conclusions.**

#### Methodology: Environmental Exposure Reports

OSAGWI included a methodology section in both of its environmental exposure reports (*Depleted Uranium in the Gulf; Oil Well Fires*). In these sections, OSAGWI described the contributions of organizations that helped OSAGWI collect and evaluate the information (i.e., the RAND Corporation, U.S. Army Environmental Hygiene Agency (USAEHA), CHPPM, and the Department of Veterans Affairs). However, OSAGWI does not explain its own methodologies. Instead, OSAGWI relies heavily on the work of other organizations.

**Recommendation: OSAGWI should clearly demonstrate how it digests and evaluates the information it amasses to reach the conclusions presented in its reports.**

#### OSAGWI Review Process

The Board found that OSAGWI failed to note that its citations often did not fully support the text in its reports. Examples of these include incorrectly citing documents, misinterpreting information, or not including information that was reported in the text. This problem occurred in each of the OSAGWI reports



reviewed, including those that the Board found to be otherwise acceptable (*Camp Monterey; Kuwaiti Girls School; Tallil Air Base, Iraq; and An Nasiriyah Southwest Ammunition Storage Point*).

Following Board recommendations, OSAGWI implemented a change in the quality assurance review of its documents. As of May 3, 1999, OSAGWI assigned a staff member who was not involved in the writing of the report to "cold read" each newly drafted report to ensure its completeness and accuracy.

OSAGWI's external review process for many of its documents does not include reviews by outside agencies or other DoD program offices that the Board thinks should have been included. For example, OSAGWI did not have the U.S. Department of Energy or the Nuclear Regulatory Agency review its DU environmental exposure report.

**The Board recommends that OSAGWI extend the external review of its environmental exposure reports to other appropriate agencies and subject matter experts.**

#### Disposition

OSAGWI releases each of its documents initially as an interim report. OSAGWI indicates on the cover of each report that interested parties should bring forward new information pertaining to the investigation "that would help us better understand the events reported here." This is similar to public comment periods that other government agencies sometimes employ with the release of their documents, except that OSAGWI has never specified a public comment end date with the release of its reports. OSAGWI began using this mechanism at the time it prepared its Khamisiyah report because it knew that additional information would be forthcoming. OSAGWI maintains that all its reports are working documents. However, in its first two years OSAGWI released 19 reports and has yet to release any updates. The Board acknowledges that OSAGWI is in the process of revising some of its reports. OSAGWI has also asked for the Board's

guidance on closing out its reports. The Board has recommended that OSAGWI close out four of its reports. However, the Board believes that OSAGWI should not depend on guidance from the Board to determine when or under what circumstances a report becomes final.

**Recommendation: OSAGWI should develop a policy for determining when and by what criteria interim reports become final.**

### **OSAGWI REPORTS REVIEWED BY THE BOARD**

#### **Environmental Exposure Reports Assessments:**

OSAGWI intended its environmental exposure reports (*Depleted Uranium in the Gulf; Oil Well Fires*) to address the health consequences of exposures to hazardous materials in the Kuwaiti Theater of Operations (KTO). The value of these investigations depends on OSAGWI's ability to characterize the nature and magnitude of the exposures to DU and oil well fire emissions. Researchers are interested in obtaining high quality exposure information (who was exposed, to what, and how much) to evaluate the likelihood that the exposures could cause adverse health effects and to study the causal relationship between those exposures and illnesses in Gulf War veterans. Health care providers are interested in exposure data to provide a basis for medical monitoring and patient care for those veterans who were exposed. OSAGWI provided exposure information for only some of the troops (Level I scenarios) exposed to DU in the Persian Gulf, and it did not characterize exposures for anyone exposed to oil well fire emissions.

## Depleted Uranium

*Environmental Exposure Report: Depleted Uranium in the Gulf*, July 31, 1998. This report is a compilation of information that describes the events that occurred in the Persian Gulf that pertain to DU. It includes a short course on DU and a general discussion of the health consequences of exposures to DU. OSAGWI also describes ongoing DU research in this report. OSAGWI contracted with the RAND Corporation to provide medical information and relied on investigations by CHPPM for estimates of radiation doses to exposed troops. The Board recognizes that OSAGWI's environmental exposure report, *Depleted Uranium in the Gulf*, is an interim report, and thus OSAGWI will revise its report based on comments it receives. The Board recommended to OSAGWI that it should elaborate on certain discussions and add information, as follows below.

- OSAGWI should delete its "bottom-line" conclusion on page 44, which states,

Exposures to DU's heavy metal (chemical) toxicity or low-level radiation are not a cause of the undiagnosed illnesses afflicting some Gulf War veterans.

It should rely instead on the more accurate statement on page 10 of the same report,

Based on data developed to date, the Office of the Special Assistant believes that while DU can pose a chemical toxicity and radiological hazard under specific conditions, the available evidence does not support claims that DU caused or is causing the undiagnosed illnesses some Gulf War veterans are experiencing.

OSAGWI has agreed with the Board, and it will revise its bottom-line conclusion in its next DU report.

- The Board recommended that OSAGWI more fully discuss the levels of exposure of Gulf War veterans to DU and DU's toxicity to the kidneys. OSAGWI has concurred with these recommendations.
- The Board believes OSAGWI should have its DU report subjected to scientific peer review. OSAGWI has agreed to contact experts in the field, suggested by the Board, to determine if they would participate in the review of the next DU report.
- The Board recommended that OSAGWI fully discuss appropriate environmental standards of DU exposure (e.g., occupational radiation workers vs. general public exposures to radiation) for military personnel. OSAGWI agreed with the Board and will broaden its discussion of environmental standards in its *Final Report*.
- The Board notes that the recently released RAND Corporation report *A Review of the Scientific Literature As It Pertains to Gulf War Illnesses, Volume 7, Depleted Uranium* is an important contribution to the issue of DU and Gulf War illnesses. Since RAND prepared this report for OSAGWI, the Board will consider this report together with OSAGWI's final DU report in the Board's *Final Report*.

Notwithstanding the above observations, the Board believes that after review of the available evidence to date, exposure to DU is unlikely to be the cause of the unexplained illnesses affecting Gulf War veterans.

## Oil Well Fires

*Environmental Exposure Report: Oil Well Fires*, October 13, 1998. This report is a compilation of information that describes burning oil wells in Kuwait during the Gulf War, the subsequent efforts to extinguish the fires, exposures to oil fire emissions, and possible health consequences to those exposures.

OSAGWI relies on *A Review of the Scientific Literature As It Pertains to Gulf War Illnesses, Volume 6, Oil Well Fires*, published by the RAND Corporation (1998), for parts of its discussion of health effects. OSAGWI depends on risk assessments conducted by CHPPM to assess the possible consequences of exposures to oil well fire emissions. OSAGWI states the following in its report:

Collectively, the results of the health effects and risk assessment studies suggest that, with the exception of particulate matter, the concentrations of contaminants were at levels below those that are known to cause short- or long-term health effects. And therefore, except for the possibility that some pre-existing respiratory conditions may be exacerbated, one would not expect exposures to the levels of contaminants to result in long-term health affects [sic].

The Board is currently reviewing the *Oil Well Fires* report and will present its findings in the *Final Report*.

## Case Narratives: Assessments

Board staff determined that for four of OSAGWI's case narratives (*Reported Detection of Chemical Agent Camp Monterey, Kuwaiti Girls School; Tallil Air Base, Iraq; and An Nasiriyah Southwest Ammunition Storage Point*) the assessments that OSAGWI made are consistent with the evidence that OSAGWI presented.

However, the Board believes that OSAGWI did not address important information in making its assessments or did not investigate leads that could

provide evidence for an alternative assessment (the *Reported Mustard Agent Exposure* and *Czech/French Chemical Agent Detection* case narratives, which will be discussed below). The Board believes similar problems occur in the *Al Jaber Air Base* and the *11<sup>th</sup> Marines* case narratives, which will be fully addressed in the *Final Report*.

### 11<sup>th</sup> Marines

*Case Narrative: 11<sup>th</sup> Marines, October 13, 1998.* This case narrative focuses on nuclear, biological, and chemical (NBC) alerts experienced by the 11<sup>th</sup> Marines, the artillery regiment that supported the 1<sup>st</sup> Marine Division during the Gulf War. The narrative provides information on each alert and determines that it was "Unlikely" that a chemical warfare agent was present in each of the 11 incidents. The Board is completing its review of this report and will discuss it further in the Board's *Final Report*.

### An Nasiriyah

*Case Narrative: An Nasiriyah Southwest Ammunition Storage Point, July 30, 1998.* This case narrative addresses the possible presence of chemical warfare agents, chemical weapons, and biological weapons at the An Nasiriyah Southwest Ammunition Storage Point in Iraq. This storage point was hit by precision guided munitions during the air war and occupied by U.S. troops following the cease-fire. OSAGWI states that, "During the post-war US occupation and demolition, no chemical weapons or biological weapons were found at this facility, nor was any chemical agent contamination detected in the storage area." OSAGWI states it is "Unlikely" that CW, BW, or bulk chemical agents were present in this complex while it was occupied by U.S. forces.

The Board made three findings about this case narrative, as follows:

- The Board found that OSAGWI's assessment that it is "likely" that more than 6,000 artillery shells filled with mustard agent were present at An Nasiriyah from January 15 to approximately February 15, 1991, is consistent with the available evidence.
- The Board also found that OSAGWI's assessment that it is "unlikely" that other types of chemical munitions were stored at An Nasiriyah, either during DESERT STORM or the postwar cease-fire operations, is consistent with the available evidence.
- Finally, the Board found that OSAGWI's assessment that it is "unlikely" that biological weapons were present at An Nasiriyah during the occupation is consistent with the available evidence.

The Board recommended that OSAGWI review this case narrative to ensure its quotations and references are accurate. OSAGWI should then consider the investigation complete and change the interim case narrative to read "Final."

#### Czech/French Chemical Agent Detections

*Case Narrative: Czech and French Reports of Possible Chemical Agent Detections*, July 29, 1998. This case narrative addresses reports by Czech and French units of seven detections of nerve or blister agents during late January 1991 in northern Saudi Arabia. OSAGWI described the incidents and assessed five of the seven as "Indeterminate" for the presence of nerve or blister agents. OSAGWI did not assess the remaining two incidents (number 1 for the presence of nerve agent, and number 6 for the presence of blister agent); however, it accepted the prior assessments of the DoD and CIA that numbers 1 and 6 are "credible" and valid.

The Board found that OSAGWI failed to make assessments for Czech chemical detection incidents 1 and 6 and recommended that OSAGWI should, in accordance with its own assessment scale, assess these incidents and republish its

report. The Board also found that OSAGWI changed its assessments of incidents 2, 3, 4, 5, and 7 without external review, and thus short-circuited the review process. It is the Board's understanding that OSAGWI is in the process of assessing incidents 1 and 6 in accordance with its assessment scale.

In addition, OSAGWI is currently revisiting the CW incidents in which the French were involved. In his June 3, 1999, letter describing chemical detections during the Gulf War, the French Minister of Defense reported to the Secretary of Defense that France "had no positive results" and "only false alarms occurred, without positive confirmations."

The Board withholds its recommendation concerning the final disposition of this case narrative until OSAGWI updates its report.

#### Tallil Air Base

*Case Narrative: Tallil Air Base, Iraq, October 30, 1997.* This report addresses the possible presence of chemical warfare agents at Tallil Air Base in southeastern Iraq. Tallil Air Base is near An Nasiriyah Southwest Ammunition Storage Point, and like An Nasiriyah it was bombed during the air war and occupied by U.S. troops following the cease-fire. During the U.S. occupation, troops found chemical warfare defensive gear but did not find chemical weapons or chemical warfare agents. OSAGWI's assessment was that it is "Unlikely" that chemical weapons or chemical agents were present at Tallil Air Base during the period of U.S. occupation in 1991.

The Board found that OSAGWI's assessment that it is "unlikely" that chemical weapons were present at Tallil Air Base during the U.S. occupation in 1991 is consistent with the available evidence.

The Board recommended that OSAGWI review this case narrative to ensure its quotations and references are accurate. OSAGWI should then consider the investigation complete and change the interim case narrative to read "Final."



### Al Jaber Air Base

*Case Narrative: Al Jaber Air Base, September 22, 1997.* This case narrative addresses reports of the presence of chemical warfare agents that occurred during U.S. Marines' efforts to retake the Kuwaiti Al Jaber Air Base in late February 1991. These reports include verbal gas alerts and Fox Reconnaissance Vehicles' alarms for blister agents. OSAGWI assessed all of the described instances as "Unlikely" for the presence of chemical warfare agents.

The Board is completing its review of this report and will discuss it further in the Board's *Final Report*.

### Reported Mustard Agent Exposure

*Case Narrative: Reported Mustard Agent Exposure Operation Desert Storm, August 27, 1997.* This report addresses the possible exposure of one Army soldier, PFC David Fisher, to mustard agent. Private Fisher developed blisters after exploring bunkers in northern Kuwait on March 1, 1991. OSAGWI assessed this soldier's blisters as "Likely" caused by a chemical warfare agent.

The Board found that much of the evidence OSAGWI presented in the case narrative is circumstantial and does not support its assessment. However, the Board notes that COL Michael Dunn, a medical doctor and an expert in chemical warfare agents who commanded the U.S. Army Research Institute of Chemical Defense during Operation DESERT SHIELD/DESERT STORM, diagnosed Private Fisher's blisters as mustard blisters (i.e., having resulted from exposure to mustard agent). The Board recognizes that Colonel Dunn's professional medical diagnosis is important evidence supporting OSAGWI's assessment.

The Board also found that OSAGWI did not fully research or investigate all possible evidence in connection with this incident. In particular, OSAGWI did not interview Colonel Dunn. Had OSAGWI done so, Colonel Dunn would have provided photographs of Private Fisher's burns to help support its assessment. OSAGWI would also have corrected inaccuracies about the number of urine

samples that Private Fisher provided, as well as inaccuracies concerning the sample analysis and disposition.

The Board notes that the investigation of this incident began before OSAGWI was established and that OSAGWI's investigation was primarily limited to reviewing available field correspondence and testimony. The Board also believes that OSAGWI's investigation process matured after this case narrative was published. The Board acknowledges that the General Accounting Office (GAO) also found weaknesses in OSAGWI's investigation of this case and relayed its concerns to OSAGWI.

The Board recommended that OSAGWI update and amend the case narrative using the Board's findings and the GAO report (GAO/NSIAD—99-59) and republish this case narrative as a final report within 90 days. OSAGWI is currently reworking this case narrative.

#### Kuwaiti Girls' School

*Case Narrative: Kuwaiti Girls' School, March 11, 1998.* A storage tank was discovered next to an outside wall of a school building in Kuwait City, Kuwait, in early August 1991. This report addresses the liquid contents of the storage tank. OSAGWI determined the tank's contents to be "Definitely Not" chemical warfare agent and "Definitely" inhibited red fuming nitric acid (IRFNA).

The Board found that OSAGWI's assessments are consistent with the best available evidence that chemical warfare agent was "definitely not" present at the Kuwaiti Girls' School and that the storage tank in question "definitely" contained IRFNA. The Board recommended that OSAGWI should consider this investigation complete and the interim report should be changed to read "Final Report."

## Camp Monterey

*Case Narrative: Reported Detection of Chemical Agent Camp Monterey, Kuwait, May 15, 1997.* On September 16, 1991, two soldiers became sick after spilling white powder from a small metal can. This report addresses the contents of the can. OSAGWI did not explicitly assess the contents of the can; however, most of the evidence provided in this report indicates that the powder was a riot control agent (CS).

The Board agreed with OSAGWI's conclusion that the complete spectrum analyses of the suspect agent by the Fox vehicles identified the compound in question as CS, a riot control agent, and not a chemical warfare agent.

The Board recommended that OSAGWI review this case narrative to ensure its quotations and references are accurate. OSAGWI should then consider the investigation complete and change the interim case narrative to read "Final."

## Chapter 5

### Presidential Advisory Committee Recommendations

The Board's charter calls for an "overall evaluation of the DoD's plan for and progress toward the implementation of the Presidential Advisory Committee's recommendations contained in its Special Report submitted to the President on October 31, 1997." The Board has used the bimonthly meeting "process" to receive updates from DoD and other agencies about the progress that has been made in implementing the 12 PAC recommendations (see listing in Appendix E).

**The Board considered the following recommendations:**

- *DoD and the Joint Chiefs of Staff, especially, should place a higher priority on addressing pre- and post-deployment surveillance. In particular, these entities should focus on ensuring field commanders are familiar with and implement thoroughly the medical surveillance directive. There is no way to compensate fully for our lack of good health assessment data of U.S. troops prior to and immediately after the Gulf War, but service members participating in future deployments and health care providers should not have to face the same inadequacies.*

Representatives from the Joint Staff and the Assistant Secretary of Defense (Health Affairs) briefed the Board on February 10, 1999, about DoD's progress in implementing the Deployment Health Surveillance and Readiness Program (DHSRP).<sup>25</sup> At a June 9, 1999, White House interagency working group meeting, the Assistant Secretary of Defense for Health Affairs noted that a recent spot inspection of some forward deployed forces in the European theater suggested overall compliance with this program was running at about 60 percent.

Scheduling constraints at the Board's July 1999 hearing required postponement of testimony from the Joint Staff and DoD Health Affairs on the subject of deployment progress in implementing the DHSRP.<sup>26</sup> The Board has arranged to reschedule these presentations and will address this program in the *Final Report*.

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<sup>25</sup> Chairman, Joint Chiefs of Staff Memorandum MCM-251-98, 4 December 1998.

<sup>26</sup> Ibid.

However, the Board has concerns and invites the Department's comments or recommendations on two aspects of this program:

1. The program definition of "deployment," and
2. The use of Human Immunodeficiency Virus (HIV)/serum sample collections as the method for post-deployment serum sampling.

The DHSRP's definition of deployment fails to include any personnel deploying for less than 30 days, and it generally does not include personnel deployed aboard vessels. Reserve component personnel from all branches of service currently deploy overseas routinely in support of ongoing operations. Since many of these deployments last for less than 30 days, these personnel cannot benefit from the protections and health screening/information gathering efforts that this program stipulates.

Additionally, the program relies on the HIV screening program to be the primary source for sera used in the DHSRP. Under existing rules, HIV samples taken one year prior to and one year following a deployment would satisfy DHSRP requirements. The Board invites the Department to comment on this aspect of the DHSRP and invites recommendations on how the HIV sera sample component of the DHSRP can be improved to obtain sera samples in a more timely manner (e.g., draw sera just prior to and just after deployments). The Board will review the Department and the Joint Staff positions on these concerns and make its recommendations in the *Final Report*.

The Board is pleased to note that a serious effort is ongoing by both the DoD and the Administration to address the overall issue of health and environmental risks that face U.S. Forces both before and during deployment. Two Board members attended a June 1999 meeting that specifically addressed the then pending deployment of U.S. Forces into Kosovo. The meeting was attended by senior representatives of the DoD, DVA, Health and Human Services, and The Joint Staff. The attendees reviewed detailed information presented in the following sessions: Environmental Surveillance Planning for Operation ALLIED FORCE; Infectious Disease Risks to Operational Forces (Balkans); Public Health Conditions in Kosovo; Environmental and Human Health Hazards of Operational Concern in Kosovo Province, Serbia; and Regional Environmental Sanitation and Contamination Issues in the Balkan States. This meeting demonstrated to the Board members present that both the Administration and the DoD are engaged in deliberate and conscious efforts to address the health and environmental risks facing U.S. Forces before

deployment. The Board is unable to assess how this information is communicated to the service person in the field. These efforts are prima facie evidence of an effort to apply lessons learned from the Gulf War experience, and the Board applauds these efforts.

- *All research on Gulf War veterans' illnesses that is funded by the government should be subjected to external competition and independent peer review. Circumventing peer review of research proposals undercuts credibility. Respect for the peer review process is necessary to ensure that the highest quality science is funded; in this era of limited fiscal resources, it is even more critical that monies are marshaled wisely to fund the most meritorious proposals. If and when new funds can be identified as available for redirection to scientific and clinical research on Gulf War veterans' illnesses, such monies should be used to fund those projects identified as having been meritorious but that initially did not receive funding due to insufficient funds, or to fund projects via a new competition and peer review.*

A representative from the Persian Gulf Veterans Coordinating Board (PGVCB) briefed the Board on April 14, 1999, about progress made by the PGVCB in implementing this recommendation. He informed the Board that 99 percent of the extramural funded research had been awarded on a competitive, peer reviewed process.

The Board agrees with the PAC about the need for Gulf War illness research projects to be funded through a peer reviewed, competitive process. The Board believes that the PGVCB, working in conjunction with the DoD, DVA, and DHHS, has satisfied this recommendation.

- *The Secretary of Defense and the Joint Chiefs of Staff should move swiftly and conscientiously to address the past and current technological limitations of U.S. CW agent detectors, so that new products can afford U.S. troops an appropriate degree of protection. To specifically address the development of detectors for low-level, sub-clinical exposures to CW agents, DoD should establish a panel that includes experts from the private sector and other agencies, including the Environmental Protection Agency and the National Institute of Standards and Technology (NIST).*
- *DoD should immediately begin developing doctrine that specifically addresses possible low-level, sub-clinical exposure to CW agents. Special consideration should be given to doctrine that establishes requirements for preventing, monitoring, recording, reporting, and assessing possible low-level CW agent exposure incidents.*

The Deputy Assistant to the Secretary of Defense for Chemical and Biological

Defense briefed the Board on April 14, 1999, about progress made by the DoD in implementing these recommendations. The speaker described DoD efforts to address potential hazards from exposure to low levels of chemical warfare agents and chemical defense countermeasures. However, he did not brief the Board about the portion of the PAC recommendation advocating the establishment of a public/private panel of experts to develop detectors for low-level, sub-clinical exposures to CW agents. In its December 1997 response to the recommendation, DoD claimed that, because its current efforts include industry and government agency partnering, "... an additional panel ... is not needed at this time."

The Board believes that progress is being made by DoD in developing equipment to detect CW agents at low levels. There have been significant strides made since the Gulf War, both in the command emphasis devoted to the Chemical and Biological Defense Program and in the developmental aspects of nuclear, biological, and chemical (NBC) equipment that was of debatable efficiency during the Gulf War. Multiple chemical alarms were noted during the Gulf War, yet the accuracy of those alarms remains the subject of debate to the present day. The Chemical and Biological Defense program can be credited with both developmental and research progress as well as progress in fielding equipment that needed improvement after examination of its performance during the Gulf War.

As a result of the Board's interest in establishing a panel of experts, DoD is re-evaluating its earlier response and may begin initial discussions with the private sector about the formation of the panel of experts. The Board will continue to monitor DoD's progress on these issues and address this recommendation in the *Final Report*.

The PAC made recommendations about waivers of informed consent and the use of investigational products during deployments. The Board was scheduled to receive a progress report on these recommendations from DoD at a bimonthly meeting. However, at the time issues concerning investigational products were being negotiated within the Executive Branch. The Board intends to receive a progress report on these issues in an upcoming bimonthly meeting and will consider these recommendations in the *Final Report*.

**The Board determined that briefings were not required for the following PAC recommendations:**

- *The White House should develop a plan to ensure Gulf War veterans and the public have access to and can be represented in the future deliberations about possible CBW agent exposures. To ensure full public accountability and reinforce the commitment to an independent review, an entity other than DoD should perform any oversight.*

The White House's response to this recommendation was to establish the Special Oversight Board. The Board is governed by the Federal Advisory Committee Act (FACA); FACA requires public access to Board meetings and records.

- *DoD should identify all individuals within a 300-mile radius from the Khamisiyah pit and conduct an additional, complementary notification. In addition to the current effort, individuals who were in the Khamisiyah vicinity, but not under the plume, also deserve to hear from the government.*

DoD reviewed the recommendation and determined that expanding notification was not necessary. The Board agrees with DoD. DoD has notified over 100,000 veterans who may have been exposed to low levels of nerve agent as the result of the Khamisiyah demolition. This notification was based on a modeling process that took a conservative approach and captured the appropriate military personnel.

At the Board's July 1999 hearing, the Special Assistant indicated that, based on new information (which may include the CIA reports to be released before the end of 1999), some individuals may have to be renotified that they are now judged to not have been exposed, and that others who were notified that they were not exposed may have to be notified that they may have been exposed. The Board is satisfied that the Defense Department has complied, and is complying, with the spirit of this recommendation. **The Board recommends that the Department continue to review new information and modeling results and take action as necessary and appropriate.**



## Chapter 6

### Recommendations and Observations

#### Recommendations

- The Board recommends that the Special Assistant (OSAGWI) report to the Board within 60 days (from the July 13, 1999, Board hearing) identifying all case narratives currently scheduled, programmed, or under analysis for potential investigation and recommend to the Board those investigations and activities that are candidates for discontinuation. (Chapter 1)
- The Board recommends that the Assistant Secretary (C<sup>3</sup>I) respond to this recommendation and report to the Secretary of Defense and the Board, within 30 days of this report, as to the progress on this matter as reported by the CJCS. (Chapter 1)
- The Board recommends that the MITRE report<sup>27</sup> regarding intelligence collection and analysis during the Gulf War be issued in an unclassified form. (Chapter 2)
- The Board recommends that the Secretary of Defense obtain a formal commitment from the Secretary of Veterans Affairs for routine participation and representation by DVA in support of OSAGWI's outreach and town hall meetings. (Chapter 3)
- The Board recommends that OSAGWI cease work on all information papers except those due to be released within 60 days of the publication of this report. (Chapter 3)

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<sup>27</sup> This report, entitled *Iraqi Chemical Warfare: Analysis of Information Available to DoD*, is also known as the *Mitre Report*. The report was commissioned by the Office of the Assistant to the Secretary of Defense for Intelligence Oversight.

- The Board recommends that any continuation of the “lessons learned” activity at OSAGWI be supported by a plan, approved and directed by the Secretary of Defense, that addresses and recognizes the formal integration of the OSAGWI lessons learned team into the existing Military Service and Joint Staff lessons learned infrastructure. (Chapter 3)
- The Board recommends that in assessing the likelihood of the presence of chemical or biological agents OSAGWI should present in its reports the evidence, its expert opinion, and the assumptions it used to weigh the pieces of evidence in reaching its conclusions. (Chapter 4)
- The Board recommends that OSAGWI should clearly demonstrate how it digests and evaluates the information it amasses to reach the conclusions presented in its reports. (Chapter 4)
- The Board recommends that OSAGWI should develop a policy for determining when and by what criteria interim reports become final. (Chapter 4)
- The Board recommends that OSAGWI include in the rewrite of its DU environmental exposure report the exposure parameters (such as quantity of DU, duration of exposure) for the 13 exposure scenarios (presented in Table 1, page 8) to establish that Level I scenarios represent the highest exposure levels. (Chapter 4)
- The Board recommends that OSAGWI extend the external review of its environmental exposure reports to other appropriate agencies and subject matter experts. (Chapter 4)
- The Board recommends that the Department continue to review new information and modeling results, and take action as necessary and appropriate. (Chapter 5)

## **Observations**

- The Board has noted the continuing difficulty of identifying individual movements in a theater of operations and that the planned PIC does not possess this capability. The Assistant Secretary of Defense for Command, Control, Communications, and Intelligence should explore the feasibility of integrating the PIC and Global Positioning System to record the battlefield location of soldiers, sailors, airmen, and marines.
- The Board has noted that the Departments of Defense, Veterans Affairs, and Health and Human Services have conducted a number of epidemiological studies on U.S. military personnel deployed to the Persian Gulf. The Board believes that an epidemiological study that compared the signs and symptoms of undiagnosed illnesses among Gulf War veterans with an age and gender matched sample of the general population would be of interest to the scientific and military communities.
- The Board has noted that some scientists suggest that genetic predispositions to certain illnesses may explain why some Gulf War veterans with similar exposures are ill while others are not. The DoD should explore the plausibility of conducting genetic susceptibility research as it applies to the U.S. military population. Such research might produce data that could provide an understanding of the basic mechanisms of toxicity. With this information DoD could better inform its personnel of possible health risks that individuals might incur from potential exposures.
- The DHSRP's definition of deployment fails to include any personnel deploying for less than 30 days, and it generally does not include personnel deployed aboard vessels. Reserve component personnel from all branches of service currently deploy overseas routinely in support of ongoing operations. Since most of these deployments last for less than 30 days, these personnel cannot benefit from the protections and health screening/information gathering efforts that this program stipulates. Additionally, the program relies on the HIV screening program to be the

primary source for sera used in the DHSRP. Under existing rules, HIV samples taken one year prior to and one year following a deployment would satisfy DHSRP requirements. The Board invites the Department to comment on this aspect of the DHSRP and invites recommendations on how the HIV sera sample component of the DHSRP can be improved to obtain sera samples in a more timely manner (e.g., draw sera just prior to and just after deployments). The Board will review the Department and the Joint Staff positions on these concerns and make its recommendations in the *Final Report*

- The Board awaits input from the DoD on those activities (case narratives/investigations) that are candidates for discontinuation. The Board has had a preliminary report from the DoD on a "scaled down" OSAGWI organization that will evolve over time. In FY 2005, this organization is to consist of approximately 75 personnel, of whom 14 would be devoted directly to "lessons learned." On November 11, 1998, the President created the Military and Veterans Health Coordinating Board (MVHCB). The Board notes that the President's Memorandum and the MVHCB Charter focus on a broad range of issues associated with the health and force protection of military members, veterans, deployed civilians, and their families during and after future combat and other operations. Since the DoD "scaled down" organization (and its "lessons learned" cell) appears to represent an effort similar to that prescribed for the MVHCB, the Board suggests that the Secretary of Defense (a member of the MVHCB) identify the functions common to these two organizations, and either a) assign those duplicative responsibilities to the MVHCB or b) report to the President why certain functions should remain with the DoD instead of being assumed by the MVHCB.
- At the July 13, 1999 Board hearing, the CIA provided public testimony indicating that a comprehensive analysis of chemical, biological and radiological exposures to Gulf War veterans may be released and published before the end of 1999. These three separate CIA analyses support and compliment the work of the Defense

Department and OSAGWI. The board will review these analyses upon publication and address their impact in the *Final Report*.

## CHAPTER 7

### Projected Activities – Future Projects

The Board projects the following activities between the *Interim* and *Final Reports*.

**Public Board Meetings:**      October 1999, Seattle, Washington  
April 2000, Washington, D.C.

**Monthly Meetings:**            2<sup>nd</sup> Wednesday of every month with OSAGWI

**Bimonthly Meetings:**        2<sup>nd</sup> Wednesday of every other month with:

OSAGWI  
OSD Health Affairs  
JCS  
PGVCB

**Case Reviews:**                The Board intends to review the following OSAGWI case  
narratives and exposure reports upon publication:

#### Case Narratives

Marine Breaching II  
Al Jubayl II  
Khamisiyah II  
Injured Marine  
Al Muthanna  
Muhammadiyah  
Ukhaydir  
Biological Warfare  
Edgewood Tapes  
Czech/French II  
M256A1 Incidents at Rafha  
Possible Post-War Chemical Use  
Possible Terrorist Attack on Al Jubayl

ARCENT Chemical Weapons Sites  
MARCENT Chemical Weapons Sites  
Fox North of Tallil  
Marine Recon

**Environmental Exposure Reports**

CARC Paint  
Particulate Exposures  
Retrograde Equipment  
Water Contamination  
Pesticides/Insecticides  
Depleted Uranium II

**OSAGWI Outreach:** Board members and staff will attend OSAGWI outreach efforts at military facilities.

**Gulf War Illnesses**

**Research Venues:** Board members and staff will attend workshops and symposiums regarding Gulf War illnesses efforts as practicable.

**PGVCB:** Board members and staff will attend PGVCB Research Working Group and Clinical Working Group meetings.

**IOM:** Board members and staff will closely monitor efforts of the National Academy of Sciences, Institute of Medicine, Committee on Health Effects Associated with Exposures Experienced During the Gulf War.

**Final Report:** The Board will issue a *Final Report* in May 2000.

## **APPENDIX A**



## Presidential Documents

Title 3—

The President

Executive Order 13075 of February 19, 1998

### Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Federal Advisory Committee Act, as amended (5 U.S.C. App.), it is hereby ordered as follows:

**Section 1. Establishment.** (a) There is hereby established the Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents ("Special Oversight Board"). The Special Oversight Board shall be composed of not more than seven members appointed by the President. The members of the Special Oversight Board shall have expertise relevant to the functions of the Special Oversight Board and shall not be full-time officials or employees of the executive branch of the Federal Government.

(b) The President shall designate a Chairperson and a Vice Chairperson from among the members of the Special Oversight Board.

**Sec. 2. Functions.** (a) The Special Oversight Board shall report to the President through the Secretary of Defense.

(b) The Special Oversight Board shall provide advice and recommendations based on its review of Department of Defense investigations into possible detections of, and exposures to, chemical or biological weapons agents and environmental and other factors that may have contributed to Gulf War illnesses.

(c) It shall not be a function of the Special Oversight Board to conduct scientific research.

(d) It shall not be a function of the Special Oversight Board to provide advice or recommendations on any legal liability of the Federal Government for any claims or potential claims against the Federal Government.

(e) The Special Oversight Board shall submit an interim report within 9 months of its first meeting and a final report within 18 months of its first meeting, unless otherwise directed by the President.

**Sec. 3. Administration.** (a) The heads of executive departments and agencies shall, to the extent permitted by law, provide the Special Oversight Board with such information as it may require for purposes of carrying out its functions.

(b) Special Oversight Board members may be allowed travel expenses, including per diem in lieu of subsistence, to the extent permitted by law for persons serving intermittently in the Government service (5 U.S.C. 5701-5707). The administrative staff for the Special Oversight Board shall be compensated in accordance with Federal law.

(c) To the extent permitted by law, and subject to the availability of appropriations, the Department of Defense shall provide the Special Oversight Board with such funds as may be necessary for the performance of its functions.

**Sec. 4. General Provisions.** (a) Notwithstanding the provisions of any other Executive order, the functions of the President under the Federal Advisory Committee Act, as amended, that are applicable to the Special Oversight Board, except that of reporting annually to the Congress, shall be performed by the Secretary of Defense, in accordance with the guidelines and procedures established by the Administrator of General Services.

(b) The Special Oversight Board shall terminate 30 days after submitting its final report.

(c) This order is intended only to improve the internal management of the executive branch and it is not intended, and shall not be construed, to create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person.

*William Clinton*

THE WHITE HOUSE,  
February 19, 1998.

FR Doc. 98-4816  
Filed 2-23-98; 8:45 am  
Billing code 3195-01-P

## **APPENDIX B**

### **CHARTER OF THE SPECIAL OVERSIGHT BOARD FOR DEPARTMENT OF DEFENSE INVESTIGATIONS OF GULF WAR CHEMICAL AND BIOLOGICAL INCIDENTS**

**A. BOARD'S OFFICIAL DESIGNATION:** Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents.

**B. AUTHORITY:** Executive Order No. 13075 dated February 19, 1998.

**C. OBJECTIVES, SCOPE OF ACTIVITIES, AND DESCRIPTION OF DUTIES FOR WHICH THE SPECIAL OVERSIGHT BOARD IS RESPONSIBLE:** The duties of the Special Oversight Board are solely advisory. The Special Oversight Board shall provide to the President, through the Secretary of Defense, advice and recommendations based on its performance of two principal roles.

1. **OVERSIGHT:** Independent oversight of the remaining investigations being conducted by the Department of Defense (DoD) with the assistance, as appropriate, of other executive departments and agencies into possible detections of, and exposures to, chemical or biological warfare agents and environmental and other factors that may have contributed to Gulf War Illnesses.

2. **EVALUATION:** Overall evaluation of the DoD's plan for and progress toward the implementation of the Presidential Advisory Committee's recommendations contained in its Special Report submitted to the President on October 31, 1997.

It shall not be a function of the Special Oversight Board to conduct scientific research. The Special Oversight Board shall review information and provide advice and recommendations on the activities undertaken related to the matters described above. It shall not be a function of the Special Oversight Board to provide advice or recommendations on any legal liability of the Federal Government for any claims or potential claims against the Federal Government. As used herein, Gulf War Illnesses means the symptoms and illnesses reported by the United States uniformed services personnel who served in the Persian Gulf Conflict.

**D. OFFICIAL TO WHOM THE COMMITTEE REPORTS:** The Special Oversight Board shall report to the President through the Secretary of Defense. The Special Oversight Board shall submit an interim report within nine (9) months of the first meeting and a final report within eighteen (18) months of its first meeting, unless otherwise directed by the President.

**E. DURATION AND TERMINATION DATE:** The Special Oversight Board shall terminate thirty (30) days after submitting its final report.

**F. AGENCY RESPONSIBLE FOR PROVIDING NECESSARY SUPPORT:** Financial and administrative support shall be provided by the DoD.

**CHARTER OF THE SPECIAL OVERSIGHT BOARD**

**FOR DEPARTMENT OF DEFENSE INVESTIGATIONS OF  
GULF WAR CHEMICAL AND BIOLOGICAL INCIDENTS  
(continued)**

**G. MEMBERSHIP:** The President appointed seven (7) members to the Special Oversight Board following its establishment. All such appointments shall remain in effect. Special Oversight Board members shall be compensated in accordance with federal law. Special Oversight Board members may be allowed travel expenses, including per diem in lieu of subsistence to the extent permitted by law for persons serving intermittently in the government service (5 U.S.C. 5701-5707).

**H. ESTIMATED ANNUAL OPERATING COSTS AND STAFF SUPPORT YEARS:** It is estimated that the total cost of operations during the eighteen (18) month period will not exceed \$1,000,000 (one million). Full time equivalent staff support years during the period of this Special Oversight Board is expected to be approximately 5 years of effort.

**I. NUMBER OF MEETINGS:** The Committee shall meet, as it deems necessary, to complete its functions. For voting purposes, a quorum shall consist of no less than 4 Board members.

**J. SUBCOMMITTEE(S):** To facilitate functioning of the Board, subcommittee(s) may be formed. The objectives of the subcommittee(s) are to provide advice and recommendations to the Board with respect to matters related to the duties of the Board. Subcommittees shall meet as the Board deems appropriate.

**K. CHAIRPERSON:** The President will designate a Chairperson and a Vice Chairperson from among the members of the Special Oversight Board.

**DATE CHARTER FILED:** 26 May 1998.

**AMENDMENT DATE:** 29 July 1998.

## **APPENDIX C**

Remarks by Chairman Warren B. Rudman taken from the Special Oversight Board Transcript, Public Hearing, November 20, 1998, day two, on how the Board will conduct oversight.

The full hearing transcript is available on the world wide web at:

[http://www.gulflink.osd.mil/oversight\\_19nov98.html](http://www.gulflink.osd.mil/oversight_19nov98.html)

[http://www.gulflink.osd.mil/oversight\\_20nov98.html](http://www.gulflink.osd.mil/oversight_20nov98.html)

SENATOR RUDMAN: Under general oversight, we are going to receive monthly updates from DoD about activities of OSAGWI's analysis groups and teams, case investigations, and information papers.

We're going to receive bimonthly updates from the Persian Gulf Veterans Coordinating Board about ongoing research efforts. We'll receive bimonthly updates from the Joint Staff on related issues.

We will prepare the Board for bimonthly meetings with DoD and other Government officials about oversight issues, and prepare the Board for regional sessions, the number of which is yet to be determined.

Secondly, on case narratives, we are going to and now we are already in the process of analyzing existing case narratives to determine if they reflect complete and accurate reporting of incidents, meet with DoD representatives to discuss issues of concern, make recommendations to Board members about case narratives that need to be finalized, and ensure that issues requiring follow-up action are timely and properly implemented.

Under current case investigations and information papers, we are going to continue to monitor efforts of the Office of the Special Assistant for Gulf War Illnesses in compiling information pertaining to current case investigations and information papers. We will analyze newly reported case narratives and information papers as they are published.

The criteria we will use include the following:

Ensuring that the findings are responsive to the objective, and they are supported by evidence;

Ensuring that conclusions are clearly stated, logically formed from evidence in the findings and are based on evidence;

Rooting out inconsistencies between new and previously published products;  
Ensuring that the methodology for determining likelihood of exposure is consistently applied;  
Determining if products are thoroughly peer reviewed;  
And determine whether lessons learned from the case narrative have been implemented.

We will report all those findings to the full Board on a regular basis.

On research, we will meet with all of the people from the various Government organizations and agencies on a regular basis to receive updates on the status of ongoing research.

Although we have a specific ban in our charter from conducting scientific research, I do not read that to mean that we cannot have very strict oversight over scientific research and we intend to do that.

We will evaluate how DoD is incorporating results from research into case narratives, information papers, and we will report findings and recommendations and so forth to the Board.

Incidentally, the Board, in small teams of two, sometimes one, will be making various trips to various places, carrying out various initiatives that the leadership of the Special Oversight Board believes are essential or, in some cases, in which members of the Board themselves, having read a great deal of information, wish to follow up.

We've already had what, two or three of those trips? One trip out of the area, a number of visits in the area. And we do that because getting the entire Board together at all times is just not necessarily the most efficient use of everyone's time, and so we set up in separate task forces to do that.

Let us talk about outreach. We will monitor and analyze OSAGWT's outreach efforts. We will plan regional meetings designed to elicit from veterans their organizations, their concerns about DoD's investigations of possible chemical and biological incidents and other factors that may have contributed to Gulf War illnesses.

We will meet with members of veterans and military service organizations on a regular basis to determine their concerns. And this, thus, is an open invitation to any veterans' service organization, or any veteran, to contact our staff at any time about any of those concerns.

We will evaluate the integration of the PAC special report of October 31, 1997, recommendations into the OSAGWI investigations.

Finally, we will issue an interim report by June 1999, according to our mandate, based on our analysis and evaluation. We will publish, at that time or sooner, any recommendations or advice that we give to any Government agencies to ensure that there is an adequate record of what we have believed and what we have done.

By March 2000,<sup>28</sup> we will issue a final report, as charged in our charter. We are not only looking at the past, but as many of you have mentioned in your testimony and your concerns, we are looking to the future, to ensure that U.S. forces, when deployed, can have, in some cases, better protection, better tracking than they have in the past.

That is our plan. Every member of this Board is committed to this, and I hope that we can continue to have all of your cooperation.

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<sup>28</sup> The *final report* will be issued in May 2000.

## **APPENDIX D**

### **MONTHLY EVENTS AND MEETINGS**

Following the November 1998 session, in response to Chairman Rudman's direction, the Board immediately began a schedule of monthly informational meetings, hosting a wide range of subject matter experts. These meetings are designed to present information to inform both Board members and staff as to the multiple issues that were impacting on the veterans, the veterans' organizations, and the various governmental agencies involved in this collective effort.

The Board has actively solicited the participation of veterans' organizations in its activities and has insured that the VSO's have been invited observers to the Board's monthly review sessions. Although the Board has not been required to announce these meetings in the Federal Register (no quorum has been present, no deliberations conducted), most sessions have had outside invited observers (veterans' organizations). In those monthly meetings in which veterans' organizations did not participate, it was because the organizations elected not to attend. The Board process has been one of openness. In accordance with the FACA, there are no Board decisions reached at these monthly meetings, and no actions are decided upon. Each month, government officials present updates on the current status of ongoing activities and investigations.

#### **August 1998**

The Board met with the Assistant Secretary of Defense for Health Affairs; visited the Walter Reed Army Hospital Gulf War Health Center Specialized Care Program; reviewed DoD's Comprehensive Clinical Evaluation Program; received briefings from the Department of Veterans Affairs; received an overview presentation of the Persian Gulf Veterans Coordinating Board Research Working Group; and received a briefing from the Joint Staff (J-4) on force health protection.

#### **September 1998**

Representatives from the Veterans of Foreign Wars, American Legion, and National Gulf War Resource Center were invited to present concerns to Board members.<sup>29</sup> Mr. Dan Fahey, National Gulf War Resource Center and author of a non-peer reviewed report on DU, was invited to summarize his views for Board members; Board and staff members traveled to Fort

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<sup>29</sup> References to "Board members" does not imply a meeting of four or more Board members, notice of which is required under FACA.



Detrick, Maryland, for presentations by CHPPM; and a Board member represented the Chairman at a White House interagency working group on Gulf War illnesses.

A Board member was briefed on the progress of the DoD toward electronic capture of information on individual service members in the "Personal Information Carrier." Following this meeting, Board member Zumwalt contacted the Chairman of the Joint Chiefs of Staff, General Henry H. Shelton, urging that the military establish a task force to explore the integration of Global Positioning System and the PIC to record the battlefield location of soldiers, sailors, airmen, and marines. This recommendation, based on the continuing difficulty in identifying individual (vs. by unit, UIC) personnel movements in a theater of operations, was forwarded to the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence.<sup>30</sup> **The Board recommends that the Assistant Secretary (C<sup>3</sup>I) respond to this recommendation and report to the Secretary of Defense and the Board, within 30 days of this report, as to the progress on this matter as reported by the CJCS.**

### **1999 Monthly Meetings**

The PAC Special Report<sup>31</sup> recommendations have also given the Board subject matter for its monthly informational meetings, and DoD and DVA staff have periodically been invited to these monthly sessions to provide updates to the Board on specific recommendations contained within the PAC Special Report. These recommendations are listed in their entirety in Appendix E and will be fully explored in the *Final Report*.

Special topics covered at meetings included:

#### **January 1999**

Update on Rand Research Activities related to Stress and the Rand Literature Review Process.

#### **February 1999**

Updates from the Joint Staff on Deployment Health Surveillance and Readiness, OSD Health Affairs update on illnesses among Gulf War veterans, update on USACHPPM DU studies.<sup>32</sup>

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<sup>30</sup> Letter, CJCS to ADM Zumwalt, Jr., 12 November 1998.

<sup>31</sup> Presidential Advisory Committee on Gulf War Veterans' Illnesses (PAC) *Special Report*, October 31, 1997.

<sup>32</sup> Veteran service organizations invited and in attendance included the Paralyzed Veterans of America, the American Legion, the National Gulf War Resource Center, Vietnam Veterans of America, and the Non Commissioned Officers Association.

#### **March 1999**

A general update on case narrative status was given by OSAGWI, followed by an overview of the Preliminary Analysis Team and how the case identification process is implemented by OSAGWI.

#### **April 1999**

The Board received an overview presentation on DoD Efforts to Address Potential Hazards from Exposure to Low Levels of Chemical Warfare Agents from the Office of the Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense.

#### **May 1999**

OSAGWI updated the Board on its Lessons Learned Directorate. Also in May, representatives from the Canadian and British Armed Forces updated Board members on each country's efforts at investigative activity on Gulf War illnesses.

#### **June 1999**

The Board held a special session and received a presentation from Dr. Robert Haley of the University of Texas, Department of Internal Medicine, on his medical research and findings as related to Gulf War veterans and a neurotoxic brain injury hypothesis. The Board invited scientific experts from Johns Hopkins University and various governmental agencies (DVA, DoD, DHHS) to the presentation, and several recommendations were offered by those scientific experts. The Board's interest was in the findings of the research and the relationship of those findings to ongoing DoD research into Gulf War illnesses. Although the research findings are not published, they offered no corroborated evidence to support the unraveling of the Gulf War illness issue. The scientists present did recommend independent research to replicate the findings presented and lend support to the as yet unproven hypotheses. Many uncertainties and assumptions accompany this research, and its theories have yet to be proven. As the Board's charter prohibits the conduct of scientific research, the Board took no action as a result of this presentation.

#### **July 1999**

A summary of this Board session will be included in the Board's *Final Report*. Highlights of this session are found in Chapter 1.

## **APPENDIX E**

### **Presidential Advisory Committee *Special Report* Recommendations**

- DoD, DVA, and DHHS should complete the comprehensive risk communication program for Gulf War veterans, as well as for forces deployed in the future; community-based outreach should receive particular focus. In view of the delay from the originally projected completion date, this effort should receive heightened priority and be completed by January 1998.
- DVA and DoD should move promptly toward full implementation of the Committee's previous recommendations on medical and clinical issues – especially those focused on follow-up care and staffing matters at DVA facilities. DVA should incorporate Gulf War veterans into its case management system as rapidly as possible.
- DoD and the Joint Chiefs of Staff, especially, should place a higher priority on addressing pre- and post-deployment surveillance. In particular, these entities should focus on ensuring field commanders are familiar with and implement thoroughly the medical surveillance directive. There is no way to compensate fully for our lack of good health assessment data of U.S. troops prior to and immediately after the Gulf War, but service members participating in future deployments and health care providers should not have to face the same inadequacies.
- DHHS should ensure that FDA places a high priority on resolving the issues raised by the Interim Final Rule on waiver of informed consent for the use of investigational products during military exigencies. Although FDA notes this matter raises several complex issues, the agency routinely handles many sensitive and difficult areas with due diligence and timeliness. FDA should finalize or revoke the Interim Final Rule no later than September 30, 1998.

- DoD should seek an independent evaluation of policies and practices concerning the use of investigational products during deployments, as well as the concepts and practices of obtaining informed consent from U.S. troops and the role of troops as human research subjects, given the nature and structure of military service. Such assessments could be sought from the President's National Bioethics Advisory Commission.
  
- All research on Gulf War veterans' illnesses that is funded by the government should be subjected to external competition and independent peer review. Circumventing peer review of research proposals undercuts credibility. Respect for the peer review process is necessary to ensure that the highest quality science is funded; in this era of limited fiscal resources, it is even more critical that monies are marshaled wisely to fund the most meritorious proposals. If and when new funds can be identified as available for redirection to scientific and clinical research on Gulf War veterans' illnesses, such monies should be used to fund those projects identified as having been meritorious but that initially did not receive funding due to insufficient funds, or to fund projects via a new competition and peer review.
  
- The Secretary of Defense and the Joint Chiefs of Staff should move swiftly and conscientiously to address the past and current technological limitations of U.S. CW agent detectors, so that new products can afford U.S. troops an appropriate degree of protection. To specifically address the development of detectors for low-level, sub-clinical exposures to CW agents, DoD should establish a panel that includes experts from the private sector and other agencies, including the Environmental Protection Agency and the National Institute of Standards and Technology (NIST).
  
- DoD should immediately begin developing doctrine that specifically addresses possible low-level, sub-clinical exposure to CW agents. Special consideration

should be given to doctrine that establishes requirements for preventing, monitoring, recording, reporting, and assessing possible low-level CW agent exposure incidents.

- DoD should identify all individuals within a 300-mile radius from the Khamisiyah pit and conduct an additional, complementary notification. In addition to the current effort, individuals who were in the Khamisiyah vicinity, but not under the plume, also deserve to hear from the government.
- The White House should develop a plan to ensure Gulf War veterans and the public have access to and can be represented in the future deliberations about possible BW agent exposures. To ensure full public accountability and reinforce the commitment to an independent review, an entity other than DoD should perform any oversight.
- Future investigations of possible chemical warfare agent exposures should adopt an objective standard against which all case investigations and all elements within a particular case – e.g., type (s) of detectors, eyewitness reports, secondary reference in an operational log, intelligence – are held to scrutiny. When evidence is indeterminate or ambiguous, the government's interpretation of, or decision making related to, the element or investigation should weigh in favor of a presumption that ensures veterans' access to information and/or benefits.
- The White House and DVA should work with Congress to establish a permanent, statutory program for Gulf War veterans' illnesses. The Committee envisions legislation that directs DVA to contract with an organization with the appropriate scientific expertise—e.g., the National Academy of Sciences—for a periodic review, for benefits and future research purposes, of the available scientific evidence regarding associations between illnesses and Gulf War service. The object of such an analysis would be to determine statistical associations between service in the Gulf War and morbidity and mortality, while also considering whether a plausible biological mechanism exists, whether research results are capable of replication and of clinical significance, and whether the data withstand peer review. Based on the external evaluation, the Secretary of Veterans Affairs would make a presumption of service

connection for positive associations or publish reasons for not doing so. We believe specific details of such a program—e.g., risk factors exposure; the timing, length, and location of an individual's service; frequency of the scientific review—are best left to the department and legislators.

## APPENDIX F

SPECIAL OVERSIGHT BOARD REVIEW OF  
OSAGWI CASE NARRATIVES

OSAGWI Product	Internal Review	Meetings w/ OSAGWI	Final Review	Report to Board	Board Approval/ Sent to OSAGWI	OSAGWI Response	Meeting w/ OSAGWI about response
Depleted Uranium	12/15/98	12/17/98	1/6/99	1/8/99	2/19/99 2/19/99	5/7/99	5/27/99
Czech/French Detections	1/6/99	1/8/99 1/15/99	1/22/99	2/22/99	3/12/99 3/16/99	4/8/99 Interim Response	
Oil Well Fires	1/15/99	1/20/99	3/5/99	3/8/99	4/1/99 4/2/99	5/27/99	
Kuwaiti Girls School	1/25/99	1/29/99	2/16/99	2/22/99	3/15/99 3/16/99	6/9/99	Not held
Mustard Agent Exposure	2/17/99	2/23/99	4/20/99	4/21/99	5/20/99 5/21/99	6/9/99	Not held
An Naszriyah	3/4/99	3/5/99	4/20/99	4/21/99	5/20/99 5/21/99	6/9/99	Not held
11 <sup>th</sup> Marine	1/8/99	1/12/99 2/3/99	6/9/99	6/15/99			
Tallil Air Base	3/4/99	3/5/99	4/20/99	4/21/99	5/20/99 5/21/99	6/9/99	Not held
Al Jaber Air Field	3/24/99	3/26/99					
ASP Orchard							
Camp Monterey	4/13/99	Not held	4/20/99	4/21/99	5/20/99 5/21/99	6/9/99	Not held
Scud Missile							
Cement Factory							

Additional OSAGWI products will be assigned and analyzed as they are published. Shaded areas represent completed tasks.

**SPECIAL OVERSIGHT BOARD REVIEW OF  
OSAGWI CASE NARRATIVES**

**ADDITIONAL OSAGWI PUBLICATIONS TO BE ANALYZED AS THEY ARE RELEASED**

**Case Narratives**

Marine Breaching II  
Al Jubayl II  
Khamisiyah II  
Injured Marine  
Al Muthanna  
Muhammadiyah  
Ukhaydir  
Biological Warfare  
Edgewood Tapes  
Czech/French II  
M256A1 Incidents at Rafha  
Possible Post-War Chemical Use  
Possible Terrorist Attack on Al Jubayl  
ARCENT Chemical Weapons Sites  
MARCENT Chemical Weapons Sites  
Fox North of Tallil  
Marine Recon

**Environmental Exposure Reports**

CARC Paint  
Particulate Exposures  
Retrograde Equipment  
Water Contamination  
Pesticides/Insecticides  
Depleted Uranium II



## **APPENDIX G**

### **Key Gulf War Illness Studies**

The following is a sampling of organizations that have studied the issue of Gulf War illnesses:

#### **Executive Branch**

##### **Presidential Advisory Committee on Gulf War Veterans' Illnesses**

Reports:     *Interim Report* (February 1996)  
              *Final Report* (December 1996)  
              *Supplemental Letter* (April 1997)  
              *Special Report* (October 1997)

#### **Department of Defense**

##### **Defense Science Board**

Report:       *Report of the Defense Science Board Task Force on Persian Gulf War Health Effects* (June 1994)

##### **Persian Gulf Illness Investigation Team (PGIIT)**

##### **Office of the Special Assistant for Gulf War Illnesses (OSAGWI)**

Reports:       Numerous; see [www.GulfLINK.gov](http://www.GulfLINK.gov) for more information

#### **RAND**

Reports:       *Reviews of the Scientific Literature As It Pertains to Gulf War Illnesses*  
Topics:        *Depleted Uranium*  
              *Stress*  
              *Oil Well Fires*  
              *Military Use of non-FDA Approved Drugs*

## **Department of Veterans Affairs**

Persian Gulf Expert Scientific Panel (February 1994)

## **Central Intelligence Agency/Intelligence Community**

### **Persian Gulf War Illness Task Force (1997)**

Reports: Numerous; see [www.GulfLINK.gov](http://www.GulfLINK.gov) or [www.CIA.gov](http://www.CIA.gov) for more information

## **Interagency**

### **Persian Gulf Veterans Coordinating Board (January 1994) (DoD/DVA/DHHS)**

Reports: Annual Reports to Congress -- 1996, 1997, and 1998

### **National Institutes of Health Technology Assessment Workshop Panel (April 1994) (DoD/DHHS/DVA/EPA)**

The Health Impact of Chemical Exposures During the Gulf War: A Research Planning Conference (February 28 – March 2, 1999)

## **National Academy of Sciences**

### **Institute of Medicine**

Reports: *Health Consequences of Service During the Persian Gulf War: Initial Findings and Recommendations for Immediate Action* (1995)

*Health Consequences of Service During the Persian Gulf War: Recommendations for Research and Information Systems* (1996)

*Adequacy of the Comprehensive Clinical Evaluation Program: Nerve Agents* (1997)

*Adequacy of the Comprehensive Clinical Evaluation Program:  
A Focused Assessment (1997)*

*Adequacy of the DVA Persian Gulf Registry and Uniform Case  
Assessment Protocol (1998)*

*Measuring the Health of Persian Gulf Veterans: Workshop  
Summary (1998)*

### **Legislative Branch**

#### **Senate Committee on Banking, Housing, and Urban Affairs**

Report: *The Riegle Report, U.S. Chemical and Biological Warfare-  
Related Dual Use Exports to Iraq and Their Possible Impact on  
the Health Consequences of the Gulf War* (May 25, 1994)

#### **House Committee on Government Reform**

Report: *Gulf War Veterans' Illnesses: VA, DoD Continue to Resist Strong  
Evidence Linking Toxic Causes to Chronic Health Effects* (1997)

#### **Senate Committee on Veterans' Affairs**

Report: *Report of the Special Investigation Unit on Gulf War Illnesses*  
(1998)

#### **General Accounting Office**

Reports: Numerous; see [www.gao.gov](http://www.gao.gov) for more information

### **International**

#### **Great Britain**

##### Gulf Veterans' Illnesses Unit (GVIU)

Reports: Numerous studies ongoing

#### **Canada**

Reports: *Health Study of Canadian Forces Personnel Involved in the  
1991 Conflict in the Persian Gulf* (1998)

## **Czech Republic**

**Reports:**     *The Czechoslovak Chemical Unit in the Persian Gulf and Examination Results Concerning a Potential Use of Combat Toxic Agents (1997)*

*The Medical Committee Report: A Project of the Ministry of Defense Concerning Participants in the Persian Gulf War (1997)*

**APPENDIX H**

**BOARD MEMBER BIOGRAPHIES**



## **Presidential Special Oversight Board for Department of Defense Investigations of Gulf War Chemical and Biological Incidents**

### **BOARD MEMBER BIOGRAPHICAL INFORMATION**

#### **The Honorable Warren B. Rudman, Chairman**

Hon. Warren B. Rudman

Senator Rudman became a partner in the international law firm Paul, Weiss, Rifkind, Wharton, and Garrison after serving two distinguished terms as a U.S. Senator from New Hampshire. The Senator maintains offices with the law firm both in Washington and New York, and on his own in New Hampshire. He was first elected to the Senate in 1980, and was overwhelmingly reelected in 1986.

Vice Chairman

Hon. Jesse Brown

Born on May 18, 1930, Senator Rudman is a life-long New Hampshire resident. He received a B.S. from Syracuse University in 1952 and served in the U.S. Army as a combat platoon leader and company commander during the Korean War. In 1960 he received his LL.B. from Boston College Law School. Senator Rudman began his career practicing law in his hometown of Nashua. In 1970, he was appointed Attorney General of New Hampshire. He later joined the Manchester, N.H., law firm Sheehan, Phinney, Bass, and Green, where he currently maintains an office part-time.

Board Members

Dr. Vinh Cam

LTG (Ret.) Marc A. Cisneros

CSM (Ret.) David W. Moore

RADM (Ret.) Alan M. Steinman

ADM (Ret.) Elmo R. Zumwalt, Jr.

During his 12 years in the Senate, Senator Rudman established a record of independence by refusing to accept out-of-state political action committee donations. Perhaps his best-known accomplishment came in 1985, when he co-authored the Gramm-Rudman-Hollings deficit reduction law, a historic step that imposed discipline and accountability on the chaotic budget process in order to reduce the federal deficit.

COL (Ret.) Michael E. Naylon

In December 1986, Senator Rudman was appointed to serve as Vice-Chairman of the Senate Select Committee investigating arms transfers to Iran. He also served on the Ethics Committee and presided over numerous investigations, including the Keating Five. Senator Rudman served on the Senate Appropriations Committee, and was active on the Subcommittees on Defense and Commerce, Justice, State, and the Judiciary, where he served as Ranking Republican. While supporting a strong military, he actively opposed expensive weapons that were not cost effective. He also served on the Intelligence Committee, the Governmental Affairs Committee, and the Permanent Subcommittee on Investigations.

Senator Rudman's inside account of his career in the Senate is detailed in his book, Combat: Twelve years in the U.S. Senate, published by Random House in 1996.

President Clinton appointed Senator Rudman as a member of the President's Foreign Intelligence Advisory Board in the fall of 1993, where he now serves as Chairman. In addition, he was appointed by the President to serve as Vice Chairman of the Commission on Roles and Capabilities of the U.S. Intelligence Community. He also serves on the Board of Trustees of Boston College, Valley Forge Military Academy, the Brookings Institution, and the Aspen Institute. He is also a member of the Senior Advisory Committee of the Institute of Politics and the John F. Kennedy School of Government at Harvard. Warren B. Rudman is founding co-chairman of the Concord Coalition.

## **BOARD MEMBER BIOGRAPHICAL INFORMATION (cont'd)**

### **The Honorable Jesse Brown, Vice Chairman**

The Honorable Jesse Brown, of Chicago, Illinois, served in President Clinton's Cabinet as Secretary of the Department of Veterans Affairs from 1993 to 1997. As Secretary, he undertook an aggressive research initiative to determine the causes of the illnesses of Persian Gulf War Veterans, and was successful in aiding the enactment of laws authorizing payment to those Veterans' undiagnosed illnesses. Mr. Brown grew up in Chicago, where he was an honors graduate of Chicago City College. He enlisted in the Marine Corps in 1963, and was wounded in combat in Vietnam in 1965. Following military service, he spent his professional career with the Disabled American Veterans, serving as their Executive Director from 1989 to 1993.

### **Dr. Vinh Cam**

Dr. Vinh Cam, of Greenwich, Connecticut, is a Consultant working with companies and non-governmental organizations on airborne toxins, hazardous waste management and environmental and occupational health matters. Among her professional work experiences, Dr. Cam was Adjunct Professor of Management Science at Pace University, did clinical research on autoimmune diseases at Rockefeller University and worked in the Environmental Protection Agency for 11 years, developing an expertise in air toxics and health risk assessments. Dr. Cam has also participated in medical missions to Vietnam, in the Commission on the Status of Women for the Fourth World Conference on Women in Beijing, the World Summit for Social Development in Copenhagen and the International Conference on Population and Development in Cairo. She has a Doctorate in Cellular Immunology/Immunotoxicology from New York University, and a Masters in Business Administration from Bernard M. Baruch College.

### **Lieutenant General (Retired) Marc Anthony Cisneros**

General Marc Anthony Cisneros, of Premont, Texas, is President of Texas A & M University—Kingsville Campus, and a retired Lieutenant General, United States Army. He entered the Army as a 2nd Lieutenant in 1961, and over the course of 34 years had a number of assignments throughout the United States and abroad, including two tours in Vietnam. He served as Commanding General, US Army South (Republic of Panama) during Operation Just Cause in 1989-1990. From 1992 to 1994, he was the Deputy Inspector General for Investigations and Oversight in the Office of the Secretary of the Army before his service as Commanding General of the Fifth United States Army, and subsequent retirement in 1996. In 1997, he was named one of the "100 Most Influential Hispanics" by *Hispanic Business Magazine*. General Cisneros graduated from St. Mary's University in San Antonio.

## **BOARD MEMBER BIOGRAPHICAL INFORMATION (cont'd)**

### **Command Sergeant Major (Retired) David W. Moore**

Mr. David W. Moore, of Aurora, Illinois, was appointed County Coroner, Kane County, Illinois, in February, 1999. Previously, he served as Lead Criminal Investigator assigned to the State Attorney's Office and a Kane County Deputy Sheriff. In his 28 years in law enforcement, Mr. Moore has had a wide variety of assignments, including criminal investigations and commanding the "bomb squad." In May, 1998, Mr. Moore retired as a Command Sergeant Major from the United States Army Reserve with 35 years of military service. He was on active duty in both Vietnam and the Persian Gulf War, and has received multiple decorations for his service. Mr. Moore received his Bachelor of Arts in Criminal/Social Justice from Lewis University, Romeoville, Illinois.

### **Rear Admiral (Retired) Alan M. Steinman**

Admiral Alan M. Steinman, of Dupont, Washington, is a retired Rear Admiral with the United States Public Health Service and the U.S. Coast Guard, and the former Surgeon General of the Coast Guard. For his contributions to health care in this capacity, Admiral Steinman received the United States Armed Forces Distinguished Service Medal. He is an expert on the management of wilderness and environmental emergencies, and has published and presented extensively on the topic. Over the course of his 25 year Coast Guard career, Admiral Steinman developed and conducted numerous testing procedures for survival under hostile circumstances. He also established a Wellness Program for Coast Guard beneficiaries and employees. Admiral Steinman received a Bachelor of Science from the Massachusetts Institute of Technology, a Masters of Public Health from the University of Washington, and a Doctor of Medicine degree from Stanford University. He currently works as a consultant in occupational and environmental medicine.

### **Admiral (Retired) Elmo R. Zumwalt, Jr.**

Admiral Elmo R. Zumwalt, Jr., of Arlington, Virginia, is a retired Admiral with the United States Navy and a former member of the Joint Chiefs of Staff. Born on November 29, 1920 in San Francisco, California, Admiral Zumwalt graduated from the United States Naval Academy and became both the youngest four-star admiral in history and the youngest person ever to serve as Chief of Naval Operations. He was Commander of United States Naval Forces in Vietnam from 1968 to 1970, where he served with his son, Naval Officer Elmo Zumwalt III. In 1988, Admiral Zumwalt's son died of cancer related to contact with Agent Orange in Vietnam. My Father, My Son was co-authored in 1986, by Admiral Zumwalt and his late son, and is an account of their Vietnam experiences and the tragedy that resulted. He retired from the Navy in 1974. Admiral Zumwalt now serves as a member of the President's Foreign Intelligence Advisory Board and is a Director of a number of corporations, including Dallas Semiconductor, Magellan Aerospace and NL Industries. He also serves as Chairman of the Marrow Foundation, the U.S. Navy Memorial Foundation, and the Ethics and Public Policy Center. He is a member of the Hudson Institute and Council of Foreign Relations.

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President Clinton established the Special Oversight Board by Executive Order 13075 of February 19, 1998 to provide recommendations based on its review of Department of Defense Investigations into possible detections of, and exposures to, chemical or biological weapons agents, and environmental and other factors that may have contributed to Gulf War illnesses. It will report to the President through the Secretary of Defense.



## APPENDIX I

### GLOSSARY

<b>A</b>	
ASP	Ammunition Supply Point
ATSD (IO)	Assistant to the Secretary of Defense for Intelligence Oversight
<b>B</b>	
BW	Biological Weapons
<b>C</b>	
CI	Command, Control, Communications and Intelligence
CAM	Chemical Agent Monitor
CARC	Chemical agent resistant coating
CBW	Chemical Biological Warfare
CCEP	Comprehensive Clinical Examination Program
CHPPM	Center for Health Promotion and Preventive Medicine
CIA	Central Intelligence Agency
CINC	Commander in Chief
CJCS	Chairman, Joint Chiefs of Staff
COL	Colonel
CS	A riot control agent "tear gas"
CW	Chemical Weapon
<b>D</b>	
DHHS	Department of Health and Human Services
DHSRP	Deployment Health Surveillance & Readiness Program
DIA	Defense Intelligence Agency
DoD	Department of Defense
DPICM	Dual Purpose Improved Conventional Munition
DS	DESERT SHIELD/DESERT STORM
DU	Depleted Uranium
DVA	Department of Veterans Affairs
<b>E</b>	
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
<b>F</b>	
FACA	Federal Advisory Committee Act
FDA	Food and Drug Administration
<b>G</b>	
GAO	General Accounting Office

GPS	Global Positioning System
GW	Gulf War
<b>H</b>	
HIV	Human Immunodeficiency Virus
<b>I</b>	
IAD	Investigations and Analysis Division
IOM	Institute of Medicine
IRFNA	Inhibited Red Fuming Nitric Acid
<b>J</b>	
J-4	The Joint Staff Logistics Directorate
JCS	Joint Chiefs of Staff
JULLS	Joint [Staff] Universal Lessons Learned System
<b>K</b>	
KTO	Kuwaiti Theater of Operations
<b>L</b>	
LLID	Lessons Learned Implementation Directorate
<b>M</b>	
MOPP	Mission Oriented Protective Posture
MSO	Military Service Organization
MVHCB	Military and Veterans Health Coordinating Board
<b>N</b>	
NAS	National Academy of Sciences
NATO	North Atlantic Treaty Organization
NBC	Nuclear, Biological, and Chemical
NIMA	National Imagery and Mapping Agency
NIST	National Institute of Standards and Technology
NSA	National Security Agency
<b>O</b>	
OSAGWI	Office of the Special Assistant for Gulf War Illnesses
<b>P</b>	
PAC	Presidential Advisory Committee on Gulf War Veterans' Illnesses
PAO	Public Affairs Office
PFC	Private First Class
PGIIT	Persian Gulf Illnesses Investigations Team
PGVCB	Persian Gulf Veterans Coordinating Board
PIC	Personal Information Carrier

<b>Q</b>	
<b>R</b>	
<b>S</b>	
SECDEF SOB	Secretary of Defense Special Oversight Board (The Board)
<b>T</b>	
<b>U</b>	
UIC	Unit Identification Code
UK	United Kingdom
UNK	Unknown
UNSCOM	United Nations Special Commission
U.S.	United States
USA	United States Army
USA	United States of America
USACHPPM	United States Army Center for Health Promotion and Preventative Medicine
USAEHA	U.S. Army Environmental Hygiene Agency (now USACHPPM)
USAF	United States Air Force
USMC	United States Marine Corps
USN	United States Navy
USCG	United States Coast Guard
<b>V</b>	
VDM	Veterans Data Management Team
VSO	Veterans Service Organization
<b>W</b>	
<b>X</b>	
<b>Y</b>	
<b>Z</b>	